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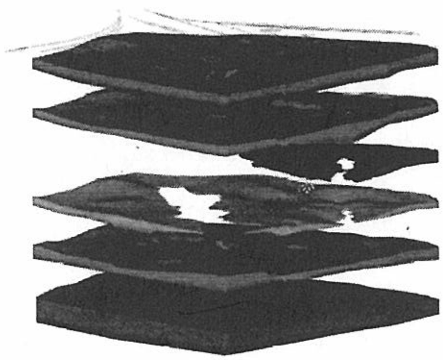
SUMMARY SITE CHARACTERIZATION REPORT
FORMER ANGELES CHEMICAL FACILITY
SANTA FE SPRINGS, CALIFORNIA



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1.0 INTRODUCTION

1.1 Purpose and Scope

Shaw Environmental & Infrastructure, Inc. has prepared this report to document results of recent subsurface investigations at the former Angeles Chemical facility and surrounding sites and to provide a site conceptual model. These recent data were combined with historical information in order to provide a comprehensive technical basis for interpretations presented here regarding soil and groundwater impacts at the site. The interpretations and conceptual model presented here will be modified as appropriate in the future as new data become available. Supplemental interpretations and/or modifications are anticipated to be provided in mid-2004.

1.2 Site Description and History

The Former Angeles Chemical facility encompasses approximately 1.8 acres at 8915 Sorenson Avenue in Santa Fe Springs, California. A site location map is given as Figure 1-1. Angeles Chemical Company operated a bulk chemical repackaging facility at the property from 1976 to 2000.

Among other improvements, the facility included 34 underground storage tanks (USTs). One UST was used for diesel fuel, one UST was used for unleaded gasoline and the remaining USTs were used to store chemicals prior to repackaging. Between 1998 and 2001, 18 USTs were excavated and removed from the site and the remaining 16 USTs were decommissioned in-place by emptying the contents and filling the tanks with a cement slurry. The UST excavation and decommissioning work was conducted under the oversight of the Santa Fe Springs Fire Department.

1.3 Adjacent Property Uses

The former Angeles Chemical facility is located in an industrial area of Santa Fe Springs and is surrounded by properties with known environmental problems (see Figure 1-2). The McKesson Corporation property is located directly south of the former Angeles Chemical site at 9005 Sorensen Avenue. McKesson operated a bulk chemical repackaging facility at this site from 1976 to 1986. The McKesson site included 44 above-ground storage tanks (ASTs) and 23 USTs and the site has documented releases from the AST area as well as illicit releases to the unlined channel that separates the McKesson and former Angeles Chemical sites. A limited soil vapor extraction system (comprising one or two wells) and a single groundwater extraction well are in place at the McKesson site as an interim remedial measure. In 1995 McKesson's consultant, Geomatrix calculated that an extraction rate of 50 gpm would be necessary to achieve containment of the groundwater plume. In actual performance, the system has averaged much lower extraction rates (for example, average pumping rate was 26.3 gpm in the first quarter of 2002)

The Air Liquide facility is located immediately west of the former Angeles Chemical site at 8832 Dice Road. This property included an unlined waste disposal pond used for storage of water and residues from acetylene production. The Pilot Chemical Company, located at 11756 Burke Street, has had documented releases of volatile organic compounds (VOCs) which have been detected in groundwater.

Southern California Chemical Corporation is located at 8851 Dice Road, west of the former Angeles Chemical site. This site has a history of hazardous waste discharges dating back to approximately 1957. Chlorinated and aromatic organic compounds have been detected in soil and groundwater at this site.

These, and a number of other nearby impacted sites have been identified by prior investigators. Most of these locations are depicted in Figure 1- 2 which was compiled by Geomatrix on behalf of McKesson.

Finally, and of particular note, a large chlorinated solvent release at the Omega Chemical site (at Whittier Blvd. about 6,000 feet to the northeast of the former Angeles Chemical site) has resulted in a regional chlorinated VOC groundwater plume that has been interpreted to occur beneath the former Angeles Chemical site and further down gradient to the southwest. A plume map interpreted by Weston (April, 2002) is reproduced here as Figure 1-3.

1.4 Regional Hydrogeology

The former Angeles Chemical site is located near the northern boundary of the Santa Fe Springs Plain within the Los Angeles Coastal Plain at an elevation of approximately 150 feet above mean sea level (msl). The Santa Fe Springs Plain has a low, slightly rolling topography. Underlying geologic units have been warped by the Santa Fe Springs-Coyote Hills anticlinal system, whose limbs dip gently to the northeast toward Whittier and to the southeast toward the Downey Plain. The nearest major fault zones are the Whittier Fault Zone approximately 3.5 miles to the northeast, and the Newport-Inglewood Fault Zone approximately 11 miles southwest.

Surficial sediments consist of fluvial deposits composed of interbedded gravel, sand, silt and clay. Available data from California Water Resources Bulletin No.104 (1961) indicate that surficial sediments may be Holocene and/or part of the upper Pleistocene Lakewood Formation. Bulletin 104 indicates that the Lakewood Formation generally ranges from 40 to 50 feet in thickness in the site vicinity. Frequent lateral lithologic changes are typical of the Lakewood Formation, with discontinuous permeable zones and considerable variation in particle size. Underlying the Lakewood Formation are stratified deposits of sand, silty sand, silt and fine gravel comprising the upper portion of the lower Pleistocene San Pedro Formation. The San Pedro Formation generally ranges from 700 to 800 feet in thickness in the site vicinity.

The shallow hydrogeology in the site vicinity has been interpreted differently by previous investigators with respect to the classifications and cross sections given in Bulletin 104, as highlighted below. The nearest cross section to the site in Bulletin 104 is provided in Figure 1-4.

The site lies within the Central Basin Pressure area, a division of the Central Groundwater Basin which extends over most of the Coastal Plain. In this area the Gaspur aquifer, a part of the basal coarse unit of Holocene deposits, is found within old channels of the San Gabriel and other rivers. Locally, the Gaspur may be 40 feet in thickness, with its base at a depth of about 80 to 100 feet bgs. The Gaspur is nonexistent in many areas. The underlying Gage aquifer is found within the upper Pleistocene Lakewood Formation.

According to SCS (1995), data from Bulletin 104 indicate that the site is located in an area in which the upper portion of the Lakewood Formation is interpreted to be truncated by overlying Holocene beds. Because of this geometric relationship, the Gaspur may be in contact with the Gage or even the underlying Hollydale aquifer, which is in the San Pedro Formation (SCS, 1995).

Interpretation of maps in Bulletin 104 by SCS indicated the Gaspur aquifer is present at the site, while the Gage aquifer is not.

The Hollydale aquifer is the uppermost regional aquifer in the San Pedro Formation. Bulletin 104 indicates that this aquifer averages approximately 30 feet thick in this area, with its top at a depth of about 70 feet bgs and its base at about 100 feet bgs.

The two groundwater units encountered during drilling at the site by SCS in 1994 were designated: the perched aquifer, (then found at a depth of approximately 23 feet bgs), and the Gaspur/ Hollydale aquifer, (then with piezometric levels of approximately 30 to 35 feet bgs).

Each of the three previous investigators (HLA, SCS and BEII) have assigned different names to each of the two shallowest groundwater zones beneath the Angeles and/or McKesson sites, resulting in six names to define two units. To simplify the classification scheme it might be best to consider the shallowest groundwater as being in the Lakewood Formation and the deeper groundwater as being in the San Pedro Formation (Hollydale Aquifer at the sites). Notwithstanding these suggested simpler designations, in the balance of this report the two observed groundwater units are referred to generically as "shallow" and "deep" for clarity.

1.5 Previous Investigations

A series of investigations have been conducted at the site in order to identify and delineate the extent of impacts to soil and groundwater. The first subsurface investigation at the former Angeles Chemical site was conducted by SCS Engineers in January 1990 (SCS, 1991). Eight soil borings were advanced to depths of up to 50 feet below ground surface (bgs). A number of VOCs were detected in the soil. Investigative locations are shown in Figure 1-5

SCS Engineers conducted a second round of subsurface investigation in June 1990 (SCS, 1991). This work involved six soil borings at depths up to 60 feet bgs and installation of one groundwater monitoring well (MW-1). VOCs were detected in soil and chlorinated and aromatic VOCs were detected in a groundwater sample collected from the new monitoring well.

California Department of Toxic Substances Control (DTSC) issued an Imminent or Substantial Endangerment Order in 1993. Among other things, the DTSC order called for Angeles Chemical Company to conduct a Remedial Investigation and Feasibility Study (RI/FS) for the site. As part of the RI/FS, additional investigations were conducted at the site in 1993 and 1994 (SCS, 1994). SCS advanced nine soil borings and installed five groundwater monitoring wells. This work further defined the extent of impact. In soil, the predominant detected VOCs were:

- acetone
- MEK
- methyl isobutyl ketone (MIBK)
- trichloroethene (TCE)
- tetrachloroethene (PCE)
- 1,1,1-trichloroethane (1,1,1-TCA)
- toluene
- xylenes

In groundwater, the predominant detected VOCs were:

- 1,1-dichloroethane (1,1-DCA)
- 1,1-dichloroethene (1,1-DCE)
- TCE
- PCE
- 1,1,1-TCA
- methylene chloride
- benzene
- ethylbenzene
- toluene and
- xylenes

In addition to the dissolved chemicals listed above, approximately 0.1 feet of free product was measured in monitoring well MW-1 near the southern boundary of the site. SCS analyzed the free product and found that it contained a mixture of VOCs including acetone, MEK, 1,1-DCA, 1,1-DCE, TCE, PCE, 1,1,1-TCA, ethylbenzene, toluene and xylenes. Free product was bailed from the well on a weekly basis from May 1994 through June 1995.

SCS Consultants conducted a soil vapor extraction pilot test at the site in 1996. This was followed by a soil vapor survey in 1997. Soil vapor samples were collected from a depth of 5 feet at 23 locations and from a depth of 15 feet at 12 locations. The highest concentrations of VOCs were detected near the railroad spur on the western side of the site. A follow-up soil vapor survey was conducted by BEII in 2000. In this survey, samples were collected from depths of 8 feet and 20 feet at each of 36 locations. In general, results from this investigation showed relatively low VOC concentrations at 8 feet and higher concentrations at 20 feet (BEII, 2001).

A third soil vapor survey was conducted at the site in January 2002 (BEII, 2002). This component of the investigation focused on the eastern, northern and southern property boundaries of the site. This investigation confirmed previous findings that soil vapor concentrations are typically higher at 20 feet and lower in the shallower soil (8 feet bgs). In addition, this survey found higher VOC concentrations in soil vapor along the southern boundary of the site, compared to data from the eastern and northern property boundary.

1.6 Recent Investigations

This report presents new data collected between June 2002 and late 2003. During this period BEII advanced 29 soil borings, 26 cone penetrometer (CPT) pushes, and installed 19 monitoring wells at the site. BEII also abandoned four older monitoring wells (MW-1, MW-2, MW-3 and MW-7) in favor of the installation of new monitoring wells. In addition to ongoing quarterly groundwater monitoring and reporting, water levels were measured in wells bi-weekly or monthly.

A significant amount of data regarding the site results from borings and monitoring wells installed in 2002 and 2003. The investigative work at the site since November, 2002 was authorized by DTSC and was focused on the complete characterization of the site. In concert with the results of previous investigations and ongoing monitoring, these new results allow the site subsurface to be well characterized. The recent investigations are summarized below.

CPT pushes CPT-1 though CPT-11 were advanced in August, 2002 to provide lithologic data of the shallow subsurface. A number of these CPT pushes also utilized laser induced fluorescence (LIF) for the screening of petroleum hydrocarbons in the subsurface.

In November 2002 more CPT pushes were advanced (CPT-12 through CPT-26), borings BSB-11 through BSB- 17 were completed to collect soil samples, and monitoring wells MW-9 through MW-21 were installed, and older monitoring well MW-01 was properly abandoned. Several of the new monitoring wells were installed with dual casings to mitigate the potential of cross contamination. In June 2003 monitoring wells MW-22 through MW-26 were installed, boring BSB-18 was sampled and older monitoring wells MW-02, MW—03 and MW-07 were properly abandoned.

Figure 1-5 shows investigative locations at the site including all of these recent points. Tables comprising the analytical results for all available historic soil and groundwater sampling events through September 2003 are presented herein. Actual laboratory reports have been previously submitted to DTSC and are therefore not included herein.

Investigative methods comprised hollow stem auger drilling with split-spoon sampling for soils. A groundwater sampling specialty firm (Blaine Tech) was contracted for groundwater sampling. All samples were collected and transported under chain-of-custody to a California Certified Laboratory for analysis. All field, sampling, and laboratory methods appear to be consistent with current standard practices for this type of work in California.

2.0 HYDROGEOLOGY OF THE SITE

2.1 Lithology / Hydrogeology

The lithology of the shallow sedimentary materials beneath the former Angeles Chemical site are well defined based on over 40 soil borings and 26 CPT pushes. Boring logs are given in Appendix A and include BSB-11 through BSB-18 and MW- 9 through MW-26 (well installation details are also provided on the boring logs). The CPT logs for CPT-1 through CPT-26 are given in Appendix B. Several of the soil samples were analyzed for physical characteristics in a laboratory and these reports are given in Appendix C.

Figure 2-1 shows the locations of borings, CPTs, and monitoring well borings at the Angeles and McKesson sites. The lithologic data from these 156 locations provides a robust data set with which the hydrostratigraphy of the sites can be characterized in some detail.

After detailed analysis of these data in concert with data and interpretations of other site and near-site investigators, six distinct hydrostratigraphic horizons became clear. Uppermost is an "overburden" unit comprising a wide range of materials from fill to silty sands to clayey silts that is designated as "unit A". Next is a well-defined clean sand (sometimes with gravel) horizon designated as "unit B". Following is a fine-grained predominantly silt zone designated as "unit C1" which is underlain by a coarser silty sand zone named "unit D." Next is the finest-grained unit observed, "unit C2" which is predominantly a clayey silt that can be finer (clay) at the top, and coarser (sandy silt) with depth. Finally, "unit E" is a clean coarse sand unit (similar to unit B) that is considered the top of the regional aquifer system and also referred to as the "A1 aquifer" of the Hollydale Aquifer by prior investigators.

Figure 2-2 is a matrix that relates CPT, boring log and physical analysis data at a representative location at the site and the hydrostratigraphic unit designations described above. As can be seen in the figure, the designations are valid (CPT-21 / MW-14) based on the results of the three aspects/methods shown (CPT, boring logs and hydraulic conductivity). The relationships shown in Figure 2-2 are generally typical of the overall site hydrogeology based on similar analyses of all available data. One of the most important steps in validating these hydrogeologic designations was the construction of a number of detailed hydrogeologic cross sections using all available data. These cross sections showed that, while two of the middle units (C1 and D) are not entirely continuous across the site, these hydrostratigraphic classifications are consistent with the data. Further, and as will be discussed subsequently in Section 4, the interpreted geometries of these units are consistent with basic tenants of sedimentary theory and in fact show regional paleo-depositional fabrics.

After validating this hydrogeologic classification system, all available boring log and CPT data were classified as to unit designations and input into a database. In addition to the Angeles data set, all available boring log and CPT data for the adjacent McKesson site were entered into the database. The McKesson data meshed well with the Angeles data and existing cross sections by consultants to McKesson were used to guide hydrogeologic classification without any reinterpretation. Then using the Environmental Visualization Software (EVS) package, 3-D images of the site hydrogeology were developed as part of the site conceptual hydrogeologic model and contaminant fate and transport analysis. It is important to note that none of the hydrogeologic contact data have been reinterpreted or manipulated in any way since initial entry into the data base. It was decided that such reinterpretation might be perceived as susceptible to bias and was therefore not done. Therefore, these visualizations, which form the cornerstone of the hydrogeologic interpretations presented herein, are as unbiased as possible.

The database / EVS platform allows for the generation of all possible cross sections depicting details of the site hydrogeology. Figure 2-3 shows the trends of Figures 2-4 through 2-8, which show five such instructive cross sections (A-A' through E-E'). These general cross-section lines were taken to best show the overall site (near the outside of the triangle formed by the site margins and two bisectors). The bisectors are aligned with important structural trends. As is also clear from Figure 2-3, these cross section lines were selected to include as many data points as possible so as to be accurate and instructive (in the case of monitoring well screen depiction).

Cross-Section A-A'(Figure 2-4) which is looking northwest at the northwestern margin of the site, shows a significant dip of all units toward the northeast. Unit C1 is absent at the southwest, but is present at a 10-foot thickness further to the northeast, thins to about 2-feet between MW-14 and MW-19, and then it gradually increases in thickness to the northeast (to MW-4).

Cross-Section B-B' (Figure 2-5) covers the McKesson site to the south as well as the former Angeles Chemical site and trends generally from southwest to northeast, looking to the northwest. Similar to A-A', the units dip slightly down to the northeast and unit C1 is not present to the southwest (in this case under the whole McKesson site). At the north of the McKesson site unit D is not present either, leaving unit B directly on unit C2 for a short distance. From the center of the section to the northeast (to the right) two important observations are made: 1) the slopes of unit B (light blue) and unit C2 (green) are generally steeply to the northeast, and 2) unit B is quite thick and looks to have eroded through all of unit C1 (red) and most of unit C2 at MW-10.

Cross-Section C-C' (Figure 2-6) is looking due west from the southeast corner of the site to the northeast corner and shows generally northeast-dipping beds, except unit B (light blue) which again seems to have scoured through units C1(red) and D (yellow) at the extreme south near MW-12 and MW-13.

Cross-Section D-D' (Figure 2-7) is looking to the northeast at a line that runs from the northwestern side of the site to the southeast corner which is coincident with the centerline of a significant southwest-dipping depositional trough at the base of unit B (light blue). The view is perpendicular to the trough which is clearly evident based on the significant thickness of unit B and the relatively diminished thickness of units C1 (red) and D (yellow). The depression at the base of unit B at MW-10 along the run of the trough is consistent with the trace of a deeper trough (in unit C2) that runs perpendicular to this one (southwest to northeast).

Cross-Section E-E' (Figure 2-8) is a northward look at the southern boundary of the site that shows several important features. First, unit C1 (red) is limited in lateral extent to the middle of the section. Second, the eastern end of the section encounters the deep trough at the base of unit B (light blue) shown above in cross section D-D' that has eroded through units C1 and D (yellow). Finally, the trough in the top of unit C2 (green) mentioned above (trending southwest to northeast) is evident as the depression at MW-18 and MW-21.

Figure 2-9 shows an oblique view of the 3-D visualization of the six hydrogeologic units slightly separated (exploded) from each other vertically. More detailed discussion of the complexities of the site hydrogeology are provided in Section 4 along with additional visualizations.

2.2 Groundwater Elevations

Groundwater occurs in two distinct zones beneath the site, in a shallow (perched) zone within the Lakewood Formation, and in a deeper zone that is interpreted to be the top of the regional aquifer system in the San Pedro Formation (Hollydale Aquifer being at the top of this sequence at the site). Figure 2-10 shows the monitoring wells at both Angeles and McKesson that are used to measure water levels in these two groundwater zones.

All available groundwater elevations measured at the site are given in Table 2-1. As seen in the table, temporal gaps exist in the data, however, in 2002 data was collected quarterly and in 2003 data was collected monthly or even bi-weekly (BEII, 2003). Figure 2-11 is a hydrograph that charts changes in water levels in all monitoring wells at the former Angeles Chemical site between December 2002 and November 2003. Two conclusions are clear from a quick review of Figure 2-11: 1) shallow well plots are grouped and have higher elevations than deep zone wells, and 2) all wells show effects of seasonal recharge events with upward trends through June and downward trends through the end of the year.

On a closer look, the deep wells, based on their increases through February (about two feet higher), seem to be affected by regional recharge while the shallow wells, based on their generally static levels through February, are not affected. However from March through May, deep and shallow wells respond quite similarly with general increases of about three feet. In June and July, deep wells start to drop several feet, again apparently responding more quickly to recharge changes than the shallow wells which, in general, decline less than a foot or are basically static. Similar to the recharge cycle, both shallow and deep wells act similarly through the dry fall season and decline several feet.

Figures 2-12 and 2-13 give larger scale hydrographs of the shallow wells and deep wells respectively for clearer comparison of water level changes within the two zones. Omitted from Figure 2-12 are wells MW-4 and MW-6, which are screened above the current water table of the shallow zone as indicated by their high elevations and relatively flat profiles in Figure 2-11.

An observation made based on analysis of the 2003 deep zone hydrograph (Figure 2-13) is that relatively rapid water level increases immediately followed by declines occurred in MW-21 in April, in MW-14 in June, and in MW-20 in October. It is also observed that at the end of the year most deep zone wells had somewhat lower elevations than at the beginning of the year, which contrasts with the shallow wells which generally (except MW-9, MW-16 and MW-18) had higher elevations at the end of 2003.

Graphs of 2003 monthly precipitation and annual (1975 to present) precipitation in the Los Angeles area are given in Figure 2-14. In comparing the specific monthly values documented in Figure 2-14 (top graph), to the site well hydrographs (Figure 2-11) several cause and effect relationships alluded to above seem to be validated. It is also observed that:

- Deep groundwater responds more rapidly to precipitation events at the beginning of the wet season than the shallow zone which may take up to two months to show increases, however once water starts rising in the shallow wells, it does so at a rate approximately equal to the deep zone.

- Once precipitation ceases in June, no water level increases are observed, indicating relatively rapid equilibration in both units, the deep zone then begins to decline rapidly while the shallow zone's decline is relatively subdued through July.

Groundwater elevation contour maps that interpret the geometry of the groundwater surface of the shallow zone throughout 2003 are provided in Figures 2-15 through 2-17. The interpreted deep groundwater zone piezeometric surfaces based on 2003 measurements are similarly shown in Figures 2-18 through 2-20. Contemporaneous data from McKesson wells were used where available to provide a wider view.

Review of these interpretations leads to several general observations for both the shallow and deep zones. Regarding the shallow groundwater interpretations for 2003 it is observed that:

- Water levels in MW-10, MW-11 and MW-12 are generally (except April 21) higher than the rest of the wells and form a ridge that trends northwest to southeast across the middle of the site. The ridge is often deflected down at the center of the site (at MW-10).

- MW-9 and MW-18, which are at the northeast corner and south-central margin of the site respectively, generally have the lowest water levels and form a groundwater trough that trends southwest to northeast and is deflected upward near the center of the site.

- The effects of seasonal recharge are evident from the relative lows in the first (February 27) and last (October 21) measurements and the relative high in May and June. The high level observed in shallow wells is an elevation of 121.19 feet in MW-12 (at the southeast corner of the site) on May 5 indicating it is nearest to a predominant recharge source.

- Most wells respond relatively rapidly (within three months) to major storm events.

- The interpreted water table configurations for consecutive measurements on April 21 and May 5 contrast strikingly, with MW-10 centered on a low in April and then over two feet higher in May and at relative high.

- Finally, the relatively low elevations (2 to 6 feet lower than the highs) to the northeast and the southwest interpreted when the water table is low in October contrast with the February interpretation which is also at a water table low but drops only 1 to 3 feet to the northeast and the southwest. This relationship suggests that the lower than average rainfall of 2003 (and 2002) (see bottom graph in Figure 2-14) has caused a lowering of the shallow water table.

Observations made from analysis of the deep groundwater interpretations presented in Figures 2-18 through 2-20 are that:

- Piezeometric highs are consistently to the east-northeast and lows to the west-southwest as evidenced in all 12 of the interpretations, indicating flow is consistently to the west-southwest.

- Elevation differences across the site are generally on the order of about two feet resulting in a relatively flat gradient of about 0.005 ft/ft.

- Overall highs (elevation 113 feet to 111 feet above mean sea level) occurred in May and June with relative lows (elevation 107 feet to 106 feet) in October indicating seasonal fluctuations of about five feet. This seasonal fluctuation is similar to the shallow groundwater zone, both temporally and in magnitude.

3.0 NATURE AND EXTENT OF CONTAMINATION

3.1 Soils

The distribution of contaminants in soil at the former Angeles Chemical site can be explained by the complex interplay among hydrogeology, release history and the physical and chemical properties of the contaminants. In review of the data, it is noted that soil samples have been collected from depths as great as 45 feet bgs, which is below the water table. This is important because much of the spatial pattern of contaminants in soil is likely the result of transport under saturated conditions. In particular, the strong horizontal component of contamination in deep soils (below about 20 feet bgs) at this site is a characteristic related to saturated flow. For deeper soil, lateral migration is likely ongoing whereas for intermediate depths (approximately 15 to 30 feet bgs) this pattern is likely a result of transient periods of saturated flow at times in the past when the water table was shallower.

A complete tabulation of soil analytical data is provided in Tables 3-1 through 3-4. While semi-volatiles and petroleum hydrocarbons have been detected at scattered locations, the most widespread contaminants in soil consist of chlorinated and aromatic organic compounds. Figures 3-1 through 3-5 show the interpreted 3-dimensional extent of 1,1,1-TCA, PCE, TCE, xylenes and toluene. It is important to note that the 3-D visualizations consider all soil samples analyzed from the site, regardless of age. This method, overestimates the current mass of VOCs in soil because it does not account for biodegradation or other mechanisms of attenuation over time.

Xylenes. As shown in Figure 3-1, there are near-surface occurrences of xylenes in the vicinity of the documented broken pipe release (near location BH-14) as well as in the northern portion of the site (near BSB-12). The near-surface occurrences exhibit a typical concentration profile with respect to depth in which relatively high concentrations in shallow soils attenuate to progressively lower concentrations at depth. For example, samples from location BH-14 contained 233 mg/kg total xylenes at 5 feet bgs, 128 mg/kg at 20 feet and 8.3 mg/kg at 40 feet. In the northern portion of the site, BSB-12 shows a similar vertical concentration profile:

- 129 mg/kg at 14.5 feet bgs;
- 21.3 mg/kg at 24.5 feet;
- 9.24 mg/kg at 34.5 feet; and
- 0.0035 mg/kg at 44.5 feet bgs.

As with the chlorinated compounds, a pattern of lateral transport is evident in data from deeper soil. Indeed, xylenes appear to have migrated laterally along at least two coalescing trajectories. The western-most occurrence is defined in part by data from location BSB-4 (Figure 3-1) near the southern boundary of the site. In this boring soil samples from 6.5 feet to 24.5 feet contain no detectable xylenes (with a single exception of 0.12 mg/kg at 17 feet). Xylenes abruptly appear in deeper samples (4.88 mg/kg at 34 feet and 4.72 mg/kg at 40 feet bgs). A similar trend is observed at BSB-6 where the highest measured concentration of total xylenes is 55.8 mg/kg at 40 feet. This occurrence appears to define a northward migration of contamination that originated from the center of the site, in the vicinity of the pipe leak. This is an important observation because it supports the fact that shallow groundwater flowed toward the north in the southern and central portions of the site, particularly when the water table was shallower than it was in 2003 (see Section 2).

Toluene. Like xylenes, the dominant pattern in the distribution of toluene in soil is a vertical column in the center of the site (near the reported pipe leak) to a depth of approximately 30 feet. Between 30 and 40 feet, there is a pronounced shift to lateral migration, with the plume extending northward across the site (Figure 3-2).

1,1,1-TCA. 1,1,1-TCA has a high of 19,000 mg/kg from a surface sample (RR-03) collected near the railroad spur along the western property boundary. In addition to scattered near-surface occurrences, Figure 3-3 shows three laterally-extensive zones that strongly suggest horizontal contaminant transport. The shallowest lateral zone is centered at BSB-17 at a depth of 14-20 feet where 1,1,1-TCA concentrations range from 11.1 to 28.5 mg/kg. The intermediate-depth lateral zone is found at a depth of 30 to 35 feet bgs. This lateral zone is more extensive and appears to originate, in part, from a southern off-site source on the McKesson property (see Figure 3-3).

Finally, a deep lateral zone is localized on the southern boundary of the property and also appears to originate, in part, from a southern off-site source on the McKesson property. This occurrence of contamination is confined to depths between approximately 40 and 44 feet bgs and is completely isolated from any shallower occurrences of 1,1,1-TCA on the former Angeles Chemical site. Data from recent soil borings confirm the isolated nature of this zone of contamination. For example, at location BSB-11, seven soil samples were collected and analyzed between 9.5 and 39.5 feet: all seven of the samples were non-detect for 1,1,1-TCA (i.e., below the laboratory detection limit of 0.005 mg/kg). Yet 1,1,1-TCA *was* detected in the samples from 42 and 44 feet at concentrations of 2.85 and 0.98 mg/kg, respectively. As discussed below, similar patterns are observed in this area for TCE and PCE.

PCE. PCE has a high of 2,300 mg/kg from a surface sample (RR-05) collected near the railroad spur along the western property boundary. Figure 3-4 illustrates the relatively widespread extent of surficial PCE impact. However, like 1,1,1-TCA, PCE exhibits a striking pattern of lateral transport in deeper soil. The deep lateral zone (discussed above in the 1,1,1-TCA section) also contains PCE. This occurrence which appears to originate from a southern, offsite source, is defined by soil profiles near the southern boundary of the former Angeles Chemical site that are completely devoid of PCE until a depth of approximately 40 feet. For example, at location BSB-11, seven soil samples were collected and analyzed between 9.5 and 39.5 feet: all seven of the samples were non-detect for PCE (i.e., below the laboratory detection limit of 0.005 mg/kg). Yet PCE was detected in the samples from 42 and 44 feet at concentrations of 1.95 and 0.18 mg/kg, respectively.

A more extensive lateral zone of PCE is found in soils of intermediate depth (25 to 30 feet bgs). This lateral zone of PCE impact also appears to originate offsite to the south and extends to the northwest across the entire former Angeles Chemical site (Figure 3-4). This zone is defined by data from MW-1, BSB-17, BSB-7 and MW-6 and has PCE concentrations up to 90.9 mg/kg.

TCE. TCE is present in much lower concentrations than 1,1,1-TCA or PCE. The maximum concentration encountered at the former Angeles Chemical site is 105 mg/kg from the 34.5 foot sample at location BSB-6 in the northwestern portion of the property. Figure 3-5 illustrates the extent of TCE impact in soil. Compared to PCE and 1,1,1-TCA, TCE exhibits a more muted pattern of lateral transport in deeper soil. However, like the other chlorinated compounds, there are unusual occurrences of TCE near the southern boundary of the former Angeles Chemical site in which soil borings are completely devoid of these compounds until a depth of approximately 40 feet. For example, at location BSB-11, seven soil samples were collected and analyzed between 9.5 and 39.5 feet: all seven of the samples were non-detect for TCE. Yet TCE was detected in the 42 foot sample at a concentration of 1.48 mg/kg. Similarly, at location BSB-4, no TCE was detected between 6.5 and 34 feet bgs, but TCE was detected at 40 feet at a concentration of 2.35 mg/kg.

3.2 Groundwater

3.2.1 Overview

Concentrations of VOCs have been detected in groundwater beneath the Angeles and McKesson sites since monitoring was initiated (1986 at McKesson and 1991 at Angeles). The shallow groundwater beneath the former Angeles Chemical site has higher concentrations of VOCs, compound by compound, than does the deep zone. In fact, the mass of VOCs in the deep groundwater beneath Angeles is quite small and of limited extent. Concentrations of most detected VOCs are greater in the deep groundwater beneath the adjacent McKesson site than they are in either the shallow or deep zones beneath Angeles. Because shallow groundwater is not currently monitored beneath McKesson (except in SB-32 at the extreme northeast corner of the site) direct comparison of concentrations in shallow groundwater cannot be made, however, VOC concentrations in shallow groundwater in 1986 in monitoring well PIMW-1- near the McKesson AST area, were the highest ever detected in groundwater at either site (e.g. 1,1,1-TCA at 880,000 ppb).

The nature and extent groundwater contamination beneath the former Angeles Chemical site is interpreted based on the new array of monitoring wells installed in 2002 and 2003. While the historic groundwater chemical data collected at both sites (Table 3-5) is useful, the analyses and discussions of this section focus primarily on the recently acquired 2nd Quarter 2003 data for the deep zone and the 3rd Quarter 2003 data for the shallow zone (BEII, 2003). The selection of these particular monitoring events for detailed analysis is based on the facts that the 2nd Quarter 2003 sampling event was the most recent where Angeles and McKesson wells were sampled at the same time, and the 3rd Quarter 2003 event is the first to incorporate newly installed shallow monitoring wells (MW-22 and MW-26) on the former Angeles Chemical site and is the most recent data as of this writing. Finally, 3rd Quarter 2003 data is used for the three new deeper deep zone wells: MW-23, MW-24 and MW-25 because it is the only available data as of this writing.

All detected compounds have been considered in our analysis, however for brevity, this discussion considers only the most prevalent, concentrated and/or instructive compounds as follows: 1,1,1-TCA, TCE, PCE, 1,1-DCA, 1,2-DCE, acetone, toluene, total xylenes, and 1,4-dioxane. Interpretations for shallow groundwater are provided first, followed by deep groundwater interpretations (which includes data from the McKesson site), concluding with a summary.

3.2.2 Shallow Groundwater Contamination

Figures 3-6 through 3-14 show interpreted lateral extents of: 1,1,1-TCA, TCE, PCE, 1,1-DCA, 1,1-DCE, acetone, toluene, total xylenes and 1,4-dioxane in shallow groundwater based on 3rd Quarter 2003 data. MW-8 and MW-19 were not analyzed due to the presence of free product. Examination of the figures gives the following observations.

1,1,1-TCA (Figure 3-6) has a high of 4,510 μg/l at the center of the site in MW-10 and is not present to the northwest (MW-11) or the northeast (MW-9 and MW-16). MW-26 (1,790 μg/l) to the southwest and MW-18 (420 μg/l) have significant concentrations while MW-12 (9 μg/l) to the southeast does not.

TCE (Figure3-7) has relatively high concentrations to the northeast (MW-16 @ 2,530 μg/l) and to the southwest (MW-26 @ 2,100 μg/l), is at low concentrations at the west (MW-9 @ 47 μg/l) and southwest (MW-12 @ 8 μg/l) and is not detected at the center of the site at MW-10, MW-11 and MW-18. The absence of TCE in the center of the site may be due to a high rate of biodegradation in this area. This TCE "hole" corresponds with high concentrations of toluene and xylenes in shallow groundwater (see below). When aromatic and chlorinated compounds are present together in the subsurface, it is well established that the degradation rate of chlorinated compounds aromatic compounds can be accelerated because the aromatic compounds serve as a carbon source that induces a strongly anoxic condition which is conducive to microbial anaerobic dehalogenation.

PCE (Figure 3-8) has a relative high of 2,930 μg/l at the southwest corner of the site (MW-26), concentrations of 273 μg/l (MW-16) and 131 μg/l (MW-9) at the northeast corner, a low concentration of 13 μg/l (MW-12) at the southeast corner, and is not detected at the center portion of the site (MW-10, MW-11 and MW-18). As with TCE, the absence of PCE in the center of the site may be due to a high rate of biodegradation due to the presence of relatively aromatic compounds in shallow groundwater in this area.

1,1-DCA (Figure 3-9) has relatively high concentrations at MW-10 (47,400 μg/l) and MW-11 (43,000 μg/l) and lower concentrations in the surrounding wells that range from 505 to 7,040 μg/l.

cis-1,2-DCE (Figure 3-10) has a high of 15,900 μg/l in MW-18 and other relatively high concentrations in MW-10 (9,290 μg/l) and MW-11 (6,950 μg/l). Other surrounding wells range from 8 μg/l (at MW-12) to 2,130 μg/l (at MW-26).

Acetone (Figure 3-11) has relative highs of 73,000 μg/l at the center (MW-10), 24,500 μg/l at the southwest corner (MW-26) and 44,200 μg/l at the south-central (MW-18) portions of the site. Acetone is detected at a lower concentration of 6,950 μg/l at the northeastern site margin (MW-11) and is not detected at all along the eastern boundary at MW-9, MW-12 and MW-16.

Toluene (3-12) has relative highs of 13,800 μg/l (MW-10) and 10,500 μg/l (MW-26) at the center and southwest corner of the site respectively. North (MW-11 @ 4,030 μg/l) and south (MW-18 @ 3,700 μg/l) of MW-10 concentrations are an order of magnitude lower and toluene is not detected at all along the eastern site border at MW-9, MW-12 and MW-16.

Xylenes (Figure 3-13) are similar in distribution to toluene, although at lower concentrations. A concentration of 6,870 μg/l is the high at MW-26, with concentrations of 4,460 μg/l, 2,620 μg/l, and 1,320 μg/l respectively at MW-10, MW-18 and MW-11. Xylenes are not detected or are very low in concentration along the eastern site boundary

1,4-dioxane (Figure 3-14) while at relatively high laboratory detection limits this sampling event, was detected in MW-9 at a concentration of 7,150 μg/l

In comparing these compound specific distributions, two distinct patterns can be discerned. 1,1,1-TCA, toluene and acetone are concentrated at the central part of the site and occur at the south-central, and southwestern corner of the site but do not occur along the eastern border (except the low concentration of 9 μg/l of 1,1,1-TCA at MW-12). The distributions of TCE and PCE are quite different in that they only occur at the southwest corner and along the eastern border and not along the central north to south corridor of the site (including MW-10, MW-11 and MW-18). Opinions regarding the cause of this observation are given subsequently in Section 4.

3.2.3 Deep Groundwater Contamination

Figures 3-15 through 3-23 show interpreted lateral extents of 1,1,1-TCA, TCE, PCE, 1,1-DCA, 1,1-DCE, acetone, toluene, total xylenes and 1,4-dioxane in deep groundwater based on 2nd Quarter 2003 data.

1,1,1-TCA (Figure 3-15) is detected in four of the six monitoring wells with the highest concentration at the south-central portion of the site at MW-21 (70 μg/l), with the other detections at MW-20 (25 μg/l), MW-11 (11 μg/l), and MW-14 (3 μg/l) and is not detected in wells MW- 13 or MW-17. None of the three wells screened at the base of the aquifer (MW-23, MW-24 or MW-25) had any detections and because two of these wells (MW-24 and MW-25) are screened directly beneath MW-21 and MW-15, the vertical extent of 1,1,1-TCA beneath the former Angeles Chemical site is well characterized.

The high of 70 μg/l (MW-21) under the former Angeles Chemical site is four orders of magnitude lower than detections beneath the McKesson AST area, which range from 360,000 to 580,000 μg/l.

TCE (Figure 3-16) is currently detected in all deep Angeles monitoring wells at concentrations ranging from 95 μg/l (MW-21) to 4 μg/l (MW-14). Concentrations along the southern margin of the site are somewhat higher than those in the central and northern portions. Very low concentrations (2 μg/l) were detected the new deeper wells MW-23 (at the northeast) and MW-24 (south-central) and 20 μg/l was detected in deeper well MW-25 (at the southwest).

The high of 95 μg/l (MW-21) under the former Angeles Chemical site is three orders of magnitude lower than that of detections beneath the McKesson AST area, which range from 25,000 to 33,000 μg/l.

PCE (Figure 3-17) is currently detected in all deep Angeles monitoring wells at concentrations ranging from 161 μg/l (MW-13) to 22 μg/l (MW-14). Concentrations at the southeast of the site are somewhat higher than those in the central and northern portions. Very low concentrations (4 μg/l) were detected the new deeper wells MW-23 (at the northeast) and MW-24 (south-central) and 12 μg/l was detected in deeper well MW-25 (at the southwest) which is lower than the 30 μg/l detected immediately above in MW-15.

The high of 161 μg/l (MW-13) under the former Angeles Chemical site is two orders of magnitude lower than that of detections beneath the McKesson AST area, which range from 60,000 to 95,000 μg/l.

1,1-DCA (Figure 3-18) has a relative high concentration in MW-21 (535 μg/l) and is detected between 12 and 107 μg/l in three outer wells and was not detected in MW-14 and MW-17. Order of magnitude higher concentrations (1,800 to 5,100 μg/l) are detected beneath the McKesson AST area.

cis-1,2-DCE (Figure 3-19) is detected at concentrations of 617 µg/l in MW-15 and 1,060 µg/l in MW-21 and other wells ranged from 2 to 40 µg/l while concentrations at the McKesson AST area were as high as 14,000 µg/l.

Acetone (Figure 3-20) is not detected in any of the deep monitoring wells at Angeles including deeper wells MW-23, MW-24 and MW-25. As seen in Figure 3-18, however, concentrations beneath the McKesson AST area are as high as 280,000 µg/l.

Toluene (Figure 3-21) is detected only in deep well MW-20 (at the north of the site) at a very low concentration of 7 µg/l and is also not detected in the three deeper monitoring wells. As seen in the figure, however, concentrations beneath the McKesson AST area are as high as 18,000 µg/l.

Xylenes (Figure 3-22), similar to toluene, are not detected in any well except MW-20 where it had a concentration of 8 µg/l as compared to a high of 2,400 µg/l beneath the McKesson AST area.

1,4-dioxane (Figure 3-23) was not detected in any deep monitoring well (including the three deeper wells) at the site (with variable laboratory reporting limits; see Table 3-5). Figure 3-23 shows that concentrations beneath the McKesson AST area are as high as 12,000 µg/l.

The distributions of these compounds in the deep groundwater can be classified into three distinct patterns: 1) acetone, toluene and 1,4-dioxane are not detected beneath the former Angeles Chemical site (the slight concentration of 7 µg/l toluene in MW-20 being the only exception); 2) TCE and PCE are detected at relatively low concentrations in all monitoring wells beneath Angeles; and 3) 1,1,1,-TCA is detected at relatively low concentrations in wells along the central south to north corridor of the site but not along the eastern margin nor in any of the three deeper wells (MW-23, MW-24 and MW-25). Finally, as depicted Figures 3-15 through 3-23, all of these compounds occur at far greater (two to four orders of magnitude) concentrations to the south of the former Angeles Chemical site in deep groundwater beneath the McKesson AST area.

3.3 Free Product

Free product has been measured floating on water in several monitoring wells (MW-1, MW-6, MW-8, MW-16, MW-18 and MW-19,) at the former Angeles Chemical site. BEII has analyzed samples of free product removed from MW-6 and MW-8. The product is a light non-aqueous phase liquid (LNAPL) consisting of petroleum hydrocarbons (812,000 mg/l and 801,000 mg/l TPH-gasoline, respectively) with smaller concentrations of chlorinated compounds dissolved in the product. This finding explains, in part, some of the differences in contaminant distributions between the Angeles and McKesson sites. In particular, the fact that concentrations in deep groundwater are orders of magnitude higher at McKesson compared to Angeles is probably due to the fact that releases at McKesson included dense non-aqueous phase liquids (DNAPLs) that sank through shallow groundwater and significantly impacted the deeper groundwater.

We are not aware that McKesson or its consultants have reported the occurrence of DNAPL, however, chemical data from the McKesson site strongly suggests its presence. US EPA and others have published the "1% Rule" which states that free product is likely to exist in the subsurface whenever concentrations of an organic contaminant exceed 1% of the solubility of the pure contaminant. (U.S. EPA, 1992, Feenstra, MacKay and Cherry, 1991, Interstate Technology & Regulatory Council, 2003). The table below compares maximum concentrations in McKesson groundwater with contaminant solubility to show that PCE and 1,1,1-TCA greatly exceed the 1% solubility threshold and TCE, toluene and xylenes are also above the threshold.

	Maximum Concentration in McKesson Groundwater (mg/l)	Solubility of Pure Compound in Water (mg/l)[1]	McKesson Occurrences as % of Solubility
1,1,1-TCA	580	1,330	44%
PCE	95	200	47%
TCE	33	1,100	3%
Toluene	18	526	3%
Xylenes[2]	2	175	1%

[1]Source: EPA, 1996 *[2]Average of reported solubilities for m-, o- & p- isomers.*

Conversely, the occurrence of LNAPLs at the former Angeles Chemical site explains both the accumulation of soil impacts at the former shallow water table (see Figures 3-1 and 3-2) and the strikingly low concentrations in deep groundwater. Due to density differences, the shallow water table acted as a barrier to further vertical migration of the LNAPL, thereby affording a degree of protection for the deep groundwater. (USEPA, 1996)

4.0 CONCEPTUAL MODEL

4.1 Hydrogeology

4.1.1 Overview

The hydrogeology of the site is relatively complex and is significantly affected by sedimentary permeability contrasts and dynamic local surface and subsurface recharge. Evaluation of lithologic data clearly indicate at least two distinct sedimentary fabrics (or facies) in the upper 50 feet that have great effect on the movement of fluids in the vadose zone and the upper groundwater zone. Opinions regarding the controlling nature of the fabrics are solidly corroborated by water level measurements taken throughout 2003. The deeper groundwater zone is less affected by these fabrics because of its relatively high transmissivity and connectivity to regional recharge / discharge. It is therefore less dynamic and predominantly influenced by the regional groundwater flow regime.

4.1.2 Fabric of Hydrogeologic Units

As introduced in Section 2, five hydrogeologic units have been identified in the upper 80 feet of site sediments: unit A is described as "overburden" and comprises fine to medium textured soils and tank backfill materials and extends from surface grade to about 15 feet bgs; unit B is a well defined clean sand and gravel bed that is laterally continuous from about 15 feet bgs down to about 25 to 40 feet; unit C is relatively fine grained generally comprising silts or sandy silts that occurs generally from 25 feet down to 50 to 60 feet bgs, unit C is differentiated into a C1 upper subunit and a C2 lower subunit because of the unit D interbed; unit D is primarily silty sand beds that occur either between C1 and C2 (over about 80% of the former Angeles Chemical site), or between units B and C2 where there is no C1 (over about 65% of the combined Angeles and McKesson sites; finally, unit E is a well defined coarse sand and gravel unit (referred to as the "A1 aquifer by other local investigators historically) that is the uppermost portion of the regional aquifer sequence.

Based on the evaluated data, unit E always contains free water, unit D generally contains free water beneath the former Angeles Chemical site (and beneath portions of the McKesson site), while unit B only sometimes contains free water (currently only in a pocket at the center of the former Angeles Chemical site). Causal rationale for these observations, as well as interpreted water level contours come from a detailed examination of the geometric relationships between the units, or fabric.

The geologic cross sections given in Section 2 provide clarity of the occurrence and relationships of the hydrogeologic units, however, these 2-dimensional representations fail to convey the complexity and nuances of the hydrogeology. In order to gain a more detailed understanding of the hydrogeologic nuances, EVS visualization software was used to generate interpretations of the 3-dimensional geometry (structure) of two key hydrogeologic contacts: the base of unit B and the base of unit D.

Figure 4-1 is a structure map of the bottom of unit B, which is a plan view contour map of the bottom surface of unit B (to aid in viewing, warm colors are added to represent relatively high elevations and cool colors represent relatively low elevations). This structure map, which shows the combined Angeles and McKesson sites, shows a fabric indicative of paleo-stream deposition from the northwest to the southeast as evidenced by the trends of the two relative lows (green at McKesson and blue at Angeles). These two nearly parallel troughs are interpreted to be paleo-stream channels whose streams flowed from northwest to southeast and eroded into the older underlying sediments as they deposited the relatively coarse grained materials comprising unit B. Judging from the relative differences in elevation and trough depths, the trough under the former Angeles Chemical site was the master channel during this depositional period. Finally, if vadose zone flow and/or shallow groundwater flow is controlled by this surface, the net flow would be from the higher elevations under the McKesson site onto the lower elevations of the former Angeles Chemical site to the north.

Figure 4-2 interprets the structure of the base of unit D (top of unit C2), which is lower and therefore older than unit B. Similar to Figure 4-1, this structure map shows the relative elevation highs to be in the southwest and lows in the northeast. However, the depositional fabric is clearly different, and is in fact about 90 degrees rotated such that the sense of flow, erosion and deposition are from the southwest toward the northeast. Four troughs separated by three ridges that run from southwest to northeast are also clearly evident, with the central trough being the most incised and probably the master channel locally. Finally, it is observed that this master channel of the base of unit D extends from directly beneath the former McKesson USTs and ASTs to the center of the former Angeles Chemical site and exits at the extreme northeast corner of the site. While dropping approximately 14 feet in elevation across this distance, there is an intra -channel depression of about 3 to 4 feet as the channel enters the southern border of the former Angeles Chemical site. This subtle feature likely has had a significant influence on recent (2003) shallow flow dynamics.

Both of these distinct depositional fabrics are considered to have significant influence and control over the migration of fluids in the upper 50 feet of the subsurface as further illustrated below.

Hydrogeologic units C1 and D exist between the two major controlling surfaces discussed above and their distributions also affect the flow of fluids in the subsurface. The interpreted 3-D geometries and relationships of these units are shown in Figure 4-3 which is an oblique view of the units "exploded" vertically from each other and unit C2. Clearly seen in this visualization are the erosional cuts through unit C1 (red) and unit D (yellow) beneath the former Angeles Chemical site and through unit D at the McKesson site, made during the deposition of unit B that indicate two nearly parallel channels that flowed from northwest to the southeast. Barely visible from this oblique angle is the southwest to northeast trending fabric cut into unit C2 (green). Two important observations made based on this visualization are:

- Fluid flowing downward by gravity from the McKesson USTs and ASTs would encounter limited finer grained materials until reaching unit C2.

- Fluids flowing downward from the unlined channel between the two sites would encounter fine-grained unit C1 (red) at the eastern portion of the channel's run and be retarded in vertical flow and would subsequently migrate horizontally to the north along the dipping upper surface of unit C1.

A map view of these three units is given in Figure 4-4. This perspective shows that fluids migrating downward through the permeable sands and gravels of unit B encounter either unit C1, D, or C2 depending on their point of entry from the surface. At areas where unit C1 (red) is encountered, such as beneath the drainage channel, and unit C2 (green) is encountered, such as beneath the McKesson USTs and ASTs, downward flow would be significantly retarded and horizontal flow would dominate as controlled by the slope of these retarding surfaces. Similarly, although less pronounced (because the permeability contrast with unit B is less), the upper surface of unit D (yellow) would also retard downward flow and cause a stronger horizontal flow component.

Another important conclusion illustrated by Figure 4-4 is that, while most of the eastern run of the unlined drainage channel between the two sites is underlain by unit C1 (red) which would generally divert recharge from the channel to the north, direct recharge of unit D can occur along the last 40 feet before the culvert under Sorenson Avenue. As discussed in Section 3, well hydrographs and shallow zone groundwater contour maps corroborate this as a significant recharge point.

In summary, there are two distinct fabrics, from northwest to southeast at the base of unit B and from the southwest to the northeast at the base of unit D (top of unit C2), that, because of permeability contrasts, control fluid flow in the upper 50 feet beneath the sites. Oblique views of these surfaces are shown in Figures 4-5 and 4-6 respectively. These controlling elements are the structural basis of the conceptual hydrogeologic model whose influence on the movement of water and contaminants is validated by data and interpretations discussed in the following subsections.

4.1.3 Shallow Groundwater Occurrence and Flow

Shallow groundwater currently occurs primarily in unit D, with two limited occurrences (MW-10 and MW-12) in unit B at points where the deposition of unit B eroded deeply into units C1 and D. Based on the recovery of relatively dry soil samples in unit C2, beneath unit D, it is surmised that unit C2 is not generally saturated and therefore generally not in direct hydraulic communication with the deep groundwater in unit E. As mentioned above, there is evidence that at times of greater recharge, the surface of the shallow groundwater was higher and within the relatively coarse sands and gravels of unit B. As discussed in Section 2, based on historic water level measurements, the shallow groundwater is quite dynamic and responds rapidly (raising or declining) to differences in recharge.

Contour maps of the shallow groundwater were presented in Section 2 that showed highs at the northwest and southeast site margins and relative lows at the south and northeast. These features, when considered together, form a hyperbolic paraboloid, or saddle geometry. Illustrating this observation is Figure 4-7 which superimposes water table ridge and trough axes from the twelve 2003 shallow zone contour maps (Figures 2-15, 2-16 and 2-17). Clearly depicted in the figure are the facts that the axes of the troughs are nearly coincident and occupy a narrow corridor trending northwest to southeast. Similarly, the trough axes are tightly clustered and occur in a narrow corridor that trends southwest to northeast. These geometries indicate recharge of the shallow groundwater from northwest and the southeast and discharge to the southwest and northeast.

Figure 4-8 shows the relationship of these shallow groundwater ridge and trough corridors to the depositional troughs discussed above in the section on hydrogeologic fabric. There is a close alignment of the water table ridge corridor with the structural[1] trough at the base of unit B. Similarly, there is close alignment between the water table trough alignment and the structural trough at the top of unit C2. These alignments are strong evidence that these lithologic structures are in fact controlling the flow of water in the shallow sediments (upper 50 feet) of the site. Specifically, these relationships imply that the shallow groundwater is being recharged through unit

[1] The term "structural trough" is used here to differentiate lithologic features from groundwater features. The term is not intended to imply a structural or tectonic geologic origin for the troughs: as described in Section 4.1.2, the troughs in unit B and unit C2 are likely depositional features.

B at the southeastern corner of the site (near MW-12) and through units D and/or B near the northwestern margin of the site (near MW-6) and that movement within unit D is therefore toward the center of the site (from the northwest and the southeast) and to the northeast and to the southwest away from the recharge corridor as controlled by the structure of the top of unit C2.

Figure 4-9 again shows the surface of unit C2 and illustrates the likely cause of the relatively complex shallow groundwater flow interpreted from data in 2003. Interpretive arrows on the figure show the interpreted southwest and northeast flow from this central point with respect to the observed groundwater surface trough and the underlying controlling structure of the top of unit C2. Based on these relationships it appears that the southwest and northeast flow components are caused by the geometry of the primary structural trough in unit C2. At relative low periods of annual recharge, like currently, the flow of recharging shallow groundwater having confluence near the center of the site becomes controlled by the shown topographic surface, that is, to the southwest and to the northeast from this central point. As seen in the figure, the inferred southwestern flow is caused by the local structural depression at the central portion of the southern border of the former Angeles Chemical site (near MW-18 and MW-21). The flow/discharge of shallow groundwater much further to the southwest (between Angeles and McKesson and/or beneath the McKesson site) would not be possible based on the shown, more elevated structure in this direction. Based on these considerations it is concluded that shallow groundwater flow currently "dead ends" or pools in this depression and does not migrate further to the southwest. Further migration of fluids thereby trapped in this depression does not occur until recharge is greater, the water table is higher, and the overall flow as controlled by the structure (the master trough) is from southwest to northeast as illustrated thematically in the figure.

As is also illustrated in Figure 4-9, it is considered likely that shallow groundwater currently beneath the former McKesson Chemical site flows northward in the subsurface along this structural trough onto the Angeles site.

In addition to influencing flow dynamics of the shallow groundwater, the structural surface of the top of unit C2 also controls the lateral extent of shallow groundwater. With the exception of the extreme northeast corner of the McKesson site (at MW-32) shallow groundwater is not currently detected beneath the McKesson site, however, it is indicated to occur beneath most of the former Angeles Chemical site. This is because, in concert with recent low recharge, the lateral extent of the shallow groundwater is controlled by the structure of unit C2. Figure 4-10 again shows the C2 upper surface, this time emphasizing the relationship of it's geometry to the observed and inferred margins of the shallow groundwater. Currently, the margin of the shallow zone is interpreted to be generally coincident with the 115-foot msl contour of the C2 surface, as shown in Figure 4-10. The areas to the north of the 115-foot elevation line (shaded blue and green) are interpreted to contain and control shallow groundwater, while the areas to the south (shaded yellowish green, yellow, orange and red) are interpreted to not currently contain shallow groundwater.

This interpretation is strengthened by data from several shallow monitoring wells installed in 2003 at the southern margin of the former Angeles Chemical site and the northern margin of the McKesson site. As shown in the figure, the two new shallow Angeles wells (MW-22 and MW-26) are on the "wet side" of the 115-foot contour, while all of the five new McKesson wells (MW-08s through MW-12s) are on the "dry side" (McKesson well MW-09s, while northeast of the primary 115-foot contour line, is coincident with a high point of a structural ridge, thus is also above elevation 115). The fact that soundings since their mid-2003 installation indicate groundwater in the Angeles wells and none in the McKesson wells agrees perfectly with the hypothesis that the 115-foot contour line of the upper surface of unit C2 defines the lateral extent of shallow groundwater and further indicates that the C2 surface controls occurrence of shallow groundwater beneath the sites.

To conclude this discussion of the conceptual hydrogeologic model of the shallow groundwater zone, Figure 4-11 is provided which is a long south to north cross section that depicts the interpreted hydrogeology beneath both sites. The cross section in Figure 4-11 has a slightly different alignment than the one in Figure 2-5 and more closely follows the trend of the master trough in the surface of unit C2. From this view (to the northwest) the unit B trough (trends northwest to southeast) is obvious at the center right of the diagram where unit C1 (red) is separated. Also clearly illustrated, as the contact between the yellow (unit D) and green (unit C2), is the sloping geometry of the master trough in the top of unit C2. Another important geometric feature is the southern terminus of unit C1 (red) visible at the left central portion of the figure, directly beneath the unlined drainage channel.

Interpretive arrows in Figure 4-11 illustrate theorized flow from the unlined drainage channel and from beneath the McKesson AST area, as well as the southwestward flow in unit B observed in the 2003 water level interpretations discussed above. The flow dynamics resulting in these flow directions and recharge influences are discussed in the following bullets.

- **Recharge from the Unlined Drainage Channel** migrates downward and away from the channel in both directions through units A and B until reaching the finer textured soils of units C1 and D which impede further downward flow. Some of the water ponding on the top of unit C1 (red) then migrates to the north along this surface in unit B in response to gravity and slowly drains into the trough cut into C1 and D (base of unit B trough that runs northwest to south east). Water from the channel can also directly recharge unit D as it ponds at the base of unit B beneath the channel due to the pinchout of unit C1 at the channel, thus exposing the medium textured (silty sands) unit D (yellow) to water from the channel in unit B. The ponding head in unit B drives some of the channel recharge into unit D where it migrates downward until hitting the contact with C2 (green) which, because of its fine grained-texture, impedes downward flow and directs flow along this surface, down slope to the north. Currently, with the shallow water table and relatively low recharge (less than normal for the last several years) these flow dynamics are likely transient in nature and include both saturated and unsaturated flow components.

- **Flow from McKesson to the North** is also depicted by an interpretive arrow in Figure 4-11. Downward migrating fluids from the McKesson site such as releases from the ASTs and/or USTs or from seepage from impoundments would encounter and flow down into unit D (yellow) and also flow to the north, beneath the former Angeles Chemical site, along the sloping surface of unit C2 (green) due to its finer-grained texture. While such flow may not always occur, it is important to note that even in times where the shallow water table is higher than it is currently and is in unit B (light blue), chlorinated solvent product leaking from McKesson ASTs and USTs could also flow toward the former Angeles Chemical site by this indicated path due to its relatively higher density than water.

- **Southern Flow in Unit D** (yellow), as illustrated by an arrow at the right central portion of Figure 4-11, is interpreted to currently occur based on water level observations in 2003. This transient phenomenon is caused by the relatively low current shallow water table, local recharge of the unit B (light blue) sand zone at the southeast and northwest margins of the former Angeles Chemical site, and the slight depression of the unit C2 (green) surface at this point of the though. As illustrated by the arrow, waters recharging unit D (yellow) through unit B (light blue) near the center of the former Angeles Chemical site seems to currently flow to the south along the C2 surface. Once reaching the slight depression in unit C2 (at MW-18) southward migration ceases and fluids collect in this depression. Notwithstanding this transient localized southern flow component, overall flow in the shallow groundwater is primarily controlled by the surface of unit C2 (green) and is down slope to the north.

Finally, there are two strong pieces of data that confirm that the water table was significantly shallower in the late 1970s and early 1980s, which could have facilitated substantial migration of contaminants from the McKesson AST area and the unlined drainage channel to beneath Angeles. First, the precipitation chart given in Figure 2-14 (bottom chart) shows that during most of the operational period of McKesson (1976 to 1986) average annual precipitation was higher than it has been for the last 20 years, causing higher recharge and presumably a higher water table than observed currently. Second, in 1986 McKesson Environmental measured water level elevations between 120 and 123 feet in several shallow zone wells (now referred to as "PIMW-1 through 4") at the AST area indicating a water table at least 5-feet higher than it has been in 2003, and that shallow groundwater has occurred directly beneath the McKesson AST area. Of note, analysis of groundwater samples (1986) detected the highest concentrations ever detected at either site for several VOCs (880,000 μg/l of 1,1,1-TCA for example).

4.1.4 Deep Groundwater Occurrence and Flow

The occurrence and flow of deep groundwater at the site is far less complicated than that of the shallow zone. Because of its fine-grained texture, unit C2 controls the flow dynamics in the shallow zone and acts as an aquitard between the shallow and deep zones. The contact between unit C2 and unit E (which comprises relatively coarse clean sands) defines the top of the deep groundwater zone. The base of this aquifer is defined by the top of a silt unit that generally occurs between 70 and 80 feet bgs. The aquifer is therefore relatively thin and ranges from about 25 to 35 feet thick across the sites. Based on all regional, historic, and recent data reviewed, flow of the deep zone beneath the Angeles and McKesson sites is consistently from the east-northeast to the west-southwest. This is consistent with regional recharge and discharge dynamics.

Figure 4-12 provides a composite of interpreted flow directions based on water level measurements taken in deep wells at both sites historically. As illustrated on this map, flow is always southwesterly and generally to the west-southwest, consistent with regional observations.

As discussed in Section 2, site hydrographs show that seasonal variations and response to specific precipitation events in deep zone wells is fairly rapid and more or less in concert with responses in the shallow zone. It is hypothesized that the relatively rapid response to precipitation events in the deep zone is predominantly related to regional recharge from off site to the northwest and generally not related to recharge from the unlined drainage channel between the sites or other site areas. However, some, relatively small volume of recharge to the deep zone beneath the sites from the shallow zone is possible.

4.2 Contaminant Fate and Transport

4.2.1 Vadose Zone (Including Shallow Groundwater) Transport

As discussed in some detail in Section 3, there are two distinctive modes of transport apparent from the soil data at the former Angeles Chemical site. For occurrences that include near-surface impacts (locations along the railroad spur and the center of the site near the reported release from a broken pipe) the distribution of volatile organic compounds suggests a predominantly vertical transport mechanism and concentrations that attenuate with depth. This pattern is typical of vadose zone transport. Migration appears to be predominantly vertical through the shallow, coarse-grained stratigraphic units A and B. There is also an indication of limited lateral dispersion at the upper contact with the finer-grained sediments of unit C. This phenomenon is also typical of contaminant behavior in the vadose zone where transient saturated conditions and/or wicking due to capillary forces can give rise to widening in a zone of impact that has an otherwise relatively consistent diameter.

The second mode of transport is essentially lateral in orientation. This pattern of lateral transport is a vivid reminder that migration of contaminants under hydrogeologic conditions that no longer prevail can leave patterns of residuals in the vadose zone whose provenance may be difficult to explain. The lateral zones of xylene and toluene in intermediate depth soil (approximately 30 feet bgs) near the center of the site are likely the result of saturated flow during periods when the water table was shallower. Importantly, this lateral transport is oriented strongly toward the north and northwest, confirming the interpretations of shallow groundwater dynamics. The lateral zones of 1,1,1-TCA and PCE impact at intermediate depths (15 to 30 feet bgs) are also likely the result of saturated flow during periods when the water table was shallower and stratigraphic zone B was more completely saturated than it is today.

The deeper instances of lateral transport of 1,1,1-TCA, PCE, xylenes (and other organic compounds) represent zones that are currently below the water table. The principal deep zone of lateral impact exactly coincides with the main trough in the base of zone D (see Section 4.1.2, above). This is the trough that extends from the major release area on the McKesson site (the USTs and AST area) formerly at McKesson to the center of the former Angeles Chemical site. It appears that the SW-NE trending fabric of unit D controls—to a large degree—the distribution of contaminants in deep soil at the former Angeles Chemical site. Deep transport may have been initiated by density-driven flow of DNAPL from McKesson releases or from more diffuse transport of dissolved contaminants or a combination of both.

These observations show that the dynamic nature of the shallow groundwater zone and the geometry of the hydrogeologic units exert strong influence over the transport of contaminants in the vadose zone. Illustrating this control are Figures 4-13 through 4-15 which show the same 10 mg/kg concentration interpretations given in Section 3 (for 1,1,1-TCA, PCE and toluene), however, this time they are colored to show the hydrogeology. These figures show soil impacts spatially with respect to the geometry of the hydrogeologic units. Based on these interpretations the following observations are made.

Figure 4-15, which shows the interpreted extent of toluene (>10 mg/kg), shows that there is a vertical continuum of toluene through hydrogeologic units A through D in the south central portion of the site (most clear in the lower image of the figure which is a lateral cross section view). As mentioned above, this distribution is likely the result of a documented on-site leaking pipe source. Generally northward lateral migration is evident in unit B (light blue) and unit C1 (red), which would be expected since unit C1 is relatively fine-grained and impedes vertical flow. Of particular note no southward migration within any unit is indicated. Also the control of the structural troughs seem quite evident, especially the south to north trending trough in the top of unit C2 which is coincident with the lower margin of the extent of toluene in the lower image.

In contrast to toluene, the distribution of 1,1,1-TCA, as depicted in Figure 4-13, indicates predominantly lateral transport at depth that is not obviously associated with any known on-site sources. The largest area of impacted soil is the thin but long occurrence that trends from south to north at the deepest elevation (about 120 feet above msl). These impacts occur primarily within the fine-grained unit C1 (red) and to a lesser extent the overlying base of unit B (light blue) and underlying top of unit D (yellow) indicating lateral flow along the unit C1 surface. Similar to toluene shown in Figure 4-15, the depth, orientation, and geometry of these deeper 1,1,1-TCA impacted soils are consistent with the noted structural troughs, demonstrating how they affect contaminant migration as well as the shallow groundwater flow regime.

Finally, based on the interpreted toluene transport (down from source and then laterally northward) scenario, it is likely that the significant lateral impacts of 1,1,1-TCA at about 30 feet bgs (elevation 120 feet), are the result of northward migration as controlled by the hydrogeologic structure, potentially from off-site sources to the south.

4.2.2 Deep Groundwater Zone Transport

In contrast to the complexity of transport in vadose zone and shallow groundwater zone, transport in the deep groundwater zone (unit E) is quite straightforward. The lateral movement of contaminants is controlled by the consistent west-southwest flow direction indicated by all reviewed historic water level data sets (including the 12 reported herein for 2003). Vertical transport from the top to the bottom of the approximately 30 foot thick unit E seems quite limited based on data from the new deeper monitoring wells that are screened at it base (MW-23, MW-24 and MW-25). Down gradient deeper wells MW-24 and MW-25 are adjacent to (paired with) MW-21 and MW-15 respectively.

Based on the interpretations provided in Section 3 (Figures 3-15 through 3-23) the following compound-specific fate and transport related observations are made considering MW-15 and MW-21 to be down gradient monitoring points for the top of the deep zone and MW-24 and MW-25 for the bottom of the deep zone:

1,1,1-TCA increases over the site from ND to 11 µg/l (MW-15) and 70 µg/l (MW-21) at the top of the zone while it is ND in all three deeper wells.

TCE is interpreted to increase only slightly across the site from up-gradient concentrations of 7 µg/l (MW-17) and 73 µg/l (MW-13) to down-gradient concentrations of 14 µg/l (MW-25) and 95 µg/l (MW-21). A concentration of 20 µg/l at MW-25 suggests some downward transport with respect to MW-15 and some increase across the site with respect to up gradient deeper well MW-23 (2 µg/l). In contrast, the 2 µg/l in deeper well MW-24 shows little downward migration there with respect to MW-21 (95 µg/l).

PCE seems to be virtually static across the site with up-gradient concentrations of 36 µg/l (MWS-17) and 161 µg/l (MW-13) and down-gradient concentrations of 30 µg/l (MW-15) and 159 µg/l (MW-21). Deeper unit E data indicate a slight increase across the site based on an upgradient concentration of 2 µg/l at MW-23 and a down-gradient detections of 12 µg/l at MW-25 and 4 µg/l at MW-24. Again, downward migration seems limited, especially at MW-24 (4 µg/l) as compared to MW-21 (159 µg/l) immediately above.

Toluene is not detected in any deep well except MW-20 where it was measured at 7 µg/l. Neither **Acetone** nor **1,4-dioxane** are detected in any deep well.

As highlighted in Section 3, the concentrations of these contaminants in the deep groundwater zone (unit E) are two to four orders of magnitude higher beneath McKesson than those detected beneath

Angeles. In consideration of this fact, the following three conclusions are made regarding the transport of contaminants in deep groundwater beneath the former Angeles Chemical site:

- VOCs detected in down-gradient Angeles wells (MW-15 and MW-21) could have been transported cross-gradient and upgradient from the high concentration plume beneath the McKesson AST area by dispersion considering relevant physical parameters (hydraulic conductivity, retardation, gradient and flow).

- The concentrations of VOCs detected beneath the former Angeles Chemical site are relatively low as compared to background concentrations related to the Omega plume.

- Notwithstanding the fact that the deep zone (unit E) is quite thin (about 30 feet in thickness), the downward migration of contaminants through these coarse-grained materials seems, in general, to be negligible

5.0 CONCLUSIONS

To summarize the major points of this report, a number of conclusions regarding the occurrence of contaminants beneath the former Angeles Chemical site are provided in this section. These conclusions are based on the data, interpretations and discussions presented above in Sections 1 through 4.

- Elevated concentrations of VOCs (including 1,1,1-TCA, TCE, PCE, acetone, toluene and xylenes) occur in site soils and the shallow groundwater zone.

- Based on their distribution, several of the VOC impacts observed in soil and shallow groundwater at the site likely have on-site sources such as the spill tank line leak (documented by SCS, 1994) and incidental spillage along the rail spur. However, the contaminant distribution also suggests that a significant mass of VOCs has migrated through the subsurface to the former Angeles Chemical site from the adjacent McKesson site.

- Groundwater occurs in two discrete hydrogeologic units beneath the site: a shallow (perched) body, currently at about 30 to 35 feet bgs, which extends under much of the site and to a lesser extent under McKesson; and a deep body at about 45 to 55 feet bgs that is interpreted to be the top of a regional aquifer system. Groundwater levels fluctuate in response to seasonal and multi-year variations in rainfall. In the mid to late 1980s shallow groundwater was as much as 15 feet higher than today.

- While the shallow groundwater has elevated VOC impacts including free product (LNAPL), the Angeles site has a *de minimus* contribution to the deep groundwater impacts (highest concentration currently is 161 µg/l which is at an up-gradient location). Further, recent deeper samples indicate that little downward contaminant migration has occurred in the deep groundwater beneath the site.

- Concentrations of most VOCs in deep groundwater are two to four orders of magnitude higher beneath the McKesson AST area than beneath the former Angeles Chemical site. Based on fundamental principals of hydrology and the transport of chemicals in groundwater, the high concentrations in the deep groundwater beneath McKesson did not migrate there from Angeles, however, the low concentrations in the deep groundwater beneath Angeles may have migrated there either from an upgradient source, or from beneath the McKesson site by dispersion or both.

- The flow direction of the deep groundwater unit is consistently to the west-southwest beneath Angeles and McKesson. However, the flow in the shallow zone is variable and is controlled by the complex dynamics of local recharge and the hydrogeologic fabric. Water levels measured in 2003 indicate a saddle shaped water table where recharge from the southeast and northwest caused flow toward the center of the site, and discharge to the northeast and southwest caused flow away from the center of the site. It is hypothesized that this flow geometry is transient and would not be observed in times of higher recharge

(2003 had lower precipitation than normal) when the shallow water table would be expected to be higher.

- The shallow hydrogeology of the site, while complex, is well understood based on data from over 156 sampling locations. These interpretations indicate there are at least two distinct structural fabrics that resulted from sedimentary depositional dynamics. The shallower trend is from northwest to southeast and is exemplified by a deep paleo-channel in a shallow sand and gravel unit (unit B). About 10 to 15 feet deeper the fabric trends from the southwest to the northeast as exemplified by a steep paleo-channel in the fine-grained layer (unit C2) that separates the vadose zone from the deep groundwater zone. These fabrics control the flow of fluids in the vadose zone and therefore the distribution of contaminants in soil and shallow groundwater.

- The control of these two structural troughs on flow dynamics is evidenced in the saddle-shaped shallow water table geometry, where a relative ridge trending northwest to southeast is coincident with the upper (northwest to southeast) fabric, and a relative trough trending southwest to northeast is coincident with the lower (southwest to northeast) fabric.

- In addition to these controlling features, a shallow fine-grained unit (unit C1) also influences flow in the vadose zone because of its downward slope to the north and its interpreted occurrence beneath the unlined drainage channel that runs between Angeles and McKesson. Recharge to the shallow groundwater from the unlined drainage channel likely occurs on this surface and contaminants from beneath McKesson and from the unlined drainage channel have similarly migrated along this path. This conclusion is corroborated forensically by VOC soil impacts that indicate contaminant transport from south to north on the C1 surface.

- Highly contaminated shallow groundwater likely occurs beneath the northeastern quadrant of the McKesson site most of the time. Shallow monitoring wells (MW-8s through MW-12s) that were recently installed at McKesson would not be expected to contain shallow groundwater at this time based on their locations with respect to the structure of the lower controlling surface (top of unit C2) and the relatively low water table. This currently unmonitored contaminated groundwater, likely flows to the northeast and impinges on the Angeles site.

- Finally, the inferred flow dynamics in the vadose zone (including the shallow groundwater unit) in concert with the documented historic occurrence of highly impacted (880,000 μg/l of 1,1,1-TCA for example) shallow groundwater beneath the McKesson AST area and forensic soil chemistry data lead to the conclusion that VOCs have migrated from the McKesson AST area to the north and into the Angeles subsurface and that such migration could still be occurring. The northward migration of DNAPL from the McKesson AST area possibly also occurred based on the high dissolved concentrations detected in the shallow groundwater there historically and the high concentrations detected there currently in the deep zone (580,000 μg/l of 1,1,1-TCA for example).

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APPENDIX A

SOIL BORING LOGS
AND
WELL CONSTRUCTION DIAGRAMS

APPENDIX B

CONE PENETROMETER TEST LOGS

APPENDIX C

SOIL PHYSICAL TESTING LABORATORY REPORTS

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
SOUTHERN CALIFORNIA SITE MITIGATION BRANCH

FEB 1 7 2004

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SUMMARY SITE CHARACTERIZATION REPORT
FORMER ANGELES CHEMICAL FACILITY
SANTA FE SPRINGS, CALIFORNIA

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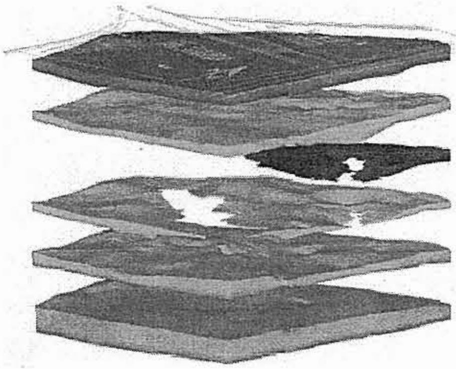

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February 2004

TABLES

Table 2-1
Groundwater Elevation Data

	2/1/1994	11/1/2000	10/1/2001	2/1/2002	6/1/2002	10/7/2002	12/17/2002	2/27/2003	3/10/2003	3/25/2003
MW-01	119.95	114.38	112.59	113.8	112.08	107.5				
MW-02	121.62	115.14	112.51	114.03	111.67	106.76	107.23	109.02	108.72	112.62
MW-03	121.09	114.37	111.6	113.4	111.6	106.13	106.57	108.99	109.44	109.99
MW-04	124.92	122.07	121.92	121.83	121.81	121.835	122.02	121.87	121.91	122.62
MW-06	124.54	120.87		119.07		119.4025		119.14	119.22	119.89
MW-07	124.09	120.43	119.92	119.41	118.55	114.51	114.59	114.32	115.44	116.72
MW-08					118.72	117.64	116.6175	116.63	117.02	118.23
MW-09					118.18	114.46	114.49	115.51	115.94	117.26
MW-10							116.78	116.71	116.97	
MW-11							116.41	116.37	116.63	117.82
MW-12							116.83	116.59	117.02	
MW-13							108.57	110.07	110.45	111.82
MW-14							107.6	109.26	109.71	111.01
MW-15							106.97	108.6	109.07	110.25
MW-16							114.63	115.72	116.31	117.62
MW-17							108.59	109.48	110.75	111.83
MW-18							116.57	113.03	114.27	116.23
MW-19							115.87	115.8	115.78	115.3
MW-20							108.03		110.06	111.44
MW-21							107.97	108.92	109.66	110.82
MW-22										
MW-23										
MW-24										
MW-25										
MW-26										

Table 2-1
Groundwater Elevation Data

	4/11/2003	4/21/2003	5/5/2003	5/19/2003	6/2/2003	7/25/2003	9/16/2003	10/8/2003	10/21/2003
MW-01									
MW-02	111.65	111.78	112.07	112.53	112.25				
MW-03	111.33	111.65	112.02	112.43	112.3				
MW-04	122.56	122.57	122.62	122.67	122.69	122.73	121.86	122.7	122.71
MW-06	119.824	118.83	119.89	119.91	119.91	119.95	119.18	119.95	119.82
MW-07	118.18	118.29	117.52	118.92	119.05				
MW-08	118.66	118.86	119.17	119.53	119.77	119.44	117.71	117.98	118.17
MW-09	117.97	118.16	118.38	118.68	118.86	118.21	114.87	114.72	114.29
MW-10	118.66	116.83	119.09	119.54	119.72	119.41	117.73	117.96	117.61
MW-11	119.4	118.37	118.79	119.11	119.56	119.24	117.28	117.6	117.26
MW-12	118.79	118.92	121.19	119.62	119.84	119.52	117.73	118.02	117.6
MW-13	112.09	112.48	112.87	113.2	113.2	111.7	108.03	107.96	107.4
MW-14	111.35	111.76	112.23	112.49	113.4	110.47	106.91	106.71	106.15
MW-15	110.85	111.2	111.6	111.89	111.84	110	106.41	106.28	105.71
MW-16	118.2	118.34	118.56	118.99	119.12	118.08	114.84	114.61	114.17
MW-17	112.31	112.72	113.14	113.55	113.51	111.85	108.38	107.95	107.58
MW-18	117.08	117.05	117.03	117.22	117.25	114.75	111.26	110.44	109.69
MW-19	117.99	118.27	118.72	119.16	119.45	118.8	116.74	117.04	
MW-20	111.9	112.25	112.71	113.02	112.98	111	107.57	110.29	106.73
MW-21	112.37	111.67	112.12	112.48	112.44	110.66	107.34	107.03	106.54
MW-22						110.56	110.8	111.39	111.4
MW-23						110.01	108.87	108.65	108.07
MW-24						110.72	107.21	107.08	106.52
MW-25						107.3	106.29	106.15	105.6
MW-26						112.68	112.38	112.08	112.04

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Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	4-Chlorotoluene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,4-Dioxane
BH-01	15	1/1/1990		nd	nd							nd	nd				
BH-01	20	1/1/1990		nd	0.2							nd	nd				
BH-02	10	1/1/1990		0.021	nd							0.076	0.029				
BH-02	15	1/1/1990		nd	nd							nd	nd				
BH-03	5	1/1/1990		nd	nd							0.062	nd				
BH-03	10	1/1/1990		nd	nd							nd	nd				
BH-03	15	1/1/1990		nd	0.11							nd	nd				
BH-03	20	1/1/1990		nd	nd							nd	nd				
BH-04	5	1/1/1990		nd	nd							0.098	nd				
BH-04	15	1/1/1990		nd	nd							nd	nd				
BH-04	20	1/1/1990		nd	nd							nd	nd				
BH-05	5	1/1/1990		nd	1.8							nd	nd				
BH-05	10	1/1/1990		nd	0.64							nd	nd				
BH-05	15	1/1/1990		nd	0.6							nd	nd				
BH-05	20	1/1/1990		nd	0.3							nd	nd				
BH-06	5	1/1/1990		nd	0.11							nd	nd				
BH-06	10	1/1/1990		nd	0.04							nd	nd				
BH-06	15	1/1/1990		0.011	1.3							0.025	nd				
BH-06	20	1/1/1990		nd	0.24							nd	nd				
BH-06	25	1/1/1990		nd	0.11							nd	nd				
BH-06	30	1/1/1990		nd	1							nd	nd				
BH-06	35	1/1/1990		nd	0.2							nd	nd				
BH-06	40	1/1/1990		0.16	1.2							0.31	0.27				
BH-06	45	1/1/1990		0.16	0.75							0.18	0.68				
BH-06	50	1/1/1990		0.067	nd							0.056	0.031				
BH-07	10	1/1/1990		0.12	nd							0.018	0.021				
BH-07	15	1/1/1990		0.046	nd							nd	nd				
BH-07	20	1/1/1990		nd	nd							nd	nd				
BH-08	10	1/1/1990		nd	nd							nd	nd				
BH-08	15	1/1/1990		nd	nd							nd	nd				
BH-08	20	1/1/1990		nd	nd							nd	nd				
BH-08	25	1/1/1990		nd	nd							nd	nd				
BH-09	5	1/1/1990	0.55	nd	0.12							0.03	nd				
BH-09	15	1/1/1990	nd	nd	nd							0.024	nd				
BH-09	25	1/1/1990	0.38	nd	0.39							nd	nd				
BH-10	10	1/1/1990	0.25	nd	nd							nd	nd				
BH-10	20	1/1/1990	0.6	nd	nd							nd	nd				
BH-11	25	1/1/1990	1.3	nd	nd							nd	nd				
BH-11	30	1/1/1990	nd	nd	0.5							nd	0.21				
BH-11	35	1/1/1990	nd	nd	nd							0.081	0.13				
BH-12	10	1/1/1990	27	nd	nd							nd	nd				
BH-12	20	1/1/1990	8.6	nd	nd							nd	nd				
BH-13	15	1/1/1990	6.9	nd	nd							nd	nd				
BH-13	30	1/1/1990	1.3	nd	nd							nd	nd				
BH-13	40	1/1/1990	11	nd	0.53							nd	0.16				
BH-14	5	1/1/1990	nd	nd	nd							nd	nd				
BH-14	10	1/1/1990	41	nd	nd							nd	nd				
BH-14	15	1/1/1990	nd	nd	nd							nd	nd				
BH-14	20	1/1/1990	50	nd	nd							nd	nd				
BH-14	25	1/1/1990	39	nd	nd							nd	nd				
BH-14	30	1/1/1990	31	10	nd							nd	nd				
BH-14	35	1/1/1990	55	nd	15							nd	nd				
BH-14	40	1/1/1990	nd	nd	nd							nd	nd				
BH-15	1	1/5/1994	4.48	0.008	0.193	<.005	<.03	<.05			<.005	0.462	0.269	<.005		<.005	
BH-15	5	1/5/1994	9.38	<.005	1.59	<.005	<.03	<.05			<.005	0.074	0.01	<.005		<.005	
BH-15	10	1/5/1994	0.067	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
BH-15	20	1/5/1994	0.261	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
BH-16	1	1/6/1994	10.1	<.05	23.4	<.05	<.3	<.5			<.05	<.05	<.05	<.05		<.05	
BH-16	5	1/6/1994	2.18	<.05	52	<.05	<.3	<.5			<.05	<.05	<.05	<.05		<.05	
BH-16	10	1/6/1994	<.5	<.05	11.6	<.05	<.3	<.5			<.05	<.05	<.05	<.05		<.05	
BH-16	20	1/6/1994	<.5	<.05	<.5	<.05	<.3	<.5			<.05	<.05	<.05	<.05		<.05	
BH-17	1	1/11/1994	39.7	<.25	12.2	<.25	<.75	<1.25			<.25	0.706	<.25	<.25		<.25	
BH-17	5	1/11/1994	25.2	<1	35.2	<1	<3	<5			<1	<1	<1	<1		<1	
BH-17	10	1/11/1994	15.4	<.01	60.3	<.01	<.03	<.05			<.01	0.011	<.01	<.01		<.01	
BH-17	20	1/11/1994	1.05	<.01	2.4	<.01	<.03	<.05			<.01	<.01	<.01	<.01		<.01	
BSB-01	10	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.035	<.005	<.005	0.05	<.005	
BSB-01	17.5	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	
BSB-01	20	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.112	0.0375	<.005	0.178	<.005	
BSB-01	27.5	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.305	0.222	<.005	0.365	<.005	
BSB-01	28	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.745	0.11	<.005	1.58	<.005	
BSB-01	35	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.205	0.1	<.005	0.308	<.005	
BSB-01	40	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.196	0.132	<.005	0.27	<.005	
BSB-01	45	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.148	0.08	<.005	0.125	<.005	
BSB-01	5	6/5/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0057	<.005	<.005	0.0195	<.005	
BSB-02	14	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	
BSB-02	18	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.035	<.005	<.005	<.005	<.005	
BSB-02	21	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	
BSB-02	26.5	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0185	0.0091	<.005	0.022	<.005	

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	DIPE	Ethylbenzene	2-Hexanone	Isopropylbenzene	Methylene Chloride	4-Methyl-2-Pentanone	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
BH-01	15	1/1/1990		nd				nd									nd
BH-01	20	1/1/1990		nd				0.18									0.016
BH-02	10	1/1/1990		0.087				nd									0.21
BH-02	15	1/1/1990		nd				0.06									nd
BH-03	5	1/1/1990		0.062				0.23									0.12
BH-03	10	1/1/1990		nd				nd									nd
BH-03	15	1/1/1990		nd				0.37									nd
BH-03	20	1/1/1990		nd				nd									nd
BH-04	5	1/1/1990		nd				nd									nd
BH-04	15	1/1/1990		nd				nd									nd
BH-04	20	1/1/1990		nd				0.98									nd
BH-05	5	1/1/1990		0.042				2.1									nd
BH-05	10	1/1/1990		0.053				2.1									0.03
BH-05	15	1/1/1990		nd				1.3									nd
BH-05	20	1/1/1990		nd				0.63									nd
BH-06	5	1/1/1990		0.071				0.12									0.035
BH-06	10	1/1/1990		nd				0.12									nd
BH-06	15	1/1/1990		0.22				1.9									0.33
BH-06	20	1/1/1990		0.013				0.6									0.026
BH-06	25	1/1/1990		nd				0.45									nd
BH-06	30	1/1/1990		0.26				2									0.75
BH-06	35	1/1/1990		nd				0.62									nd
BH-06	40	1/1/1990		0.22				2.3									0.15
BH-06	45	1/1/1990		1.1				2.2									0.94
BH-06	50	1/1/1990		0.039				1.2									0.01
BH-07	10	1/1/1990		nd				nd									0.02
BH-07	15	1/1/1990		nd				nd									nd
BH-07	20	1/1/1990		nd				nd									nd
BH-08	10	1/1/1990		nd				nd									nd
BH-08	15	1/1/1990		nd				nd									nd
BH-08	20	1/1/1990		nd				nd									nd
BH-08	25	1/1/1990		nd				nd									nd
BH-09	5	1/1/1990		0.037			0.46	0.45									0.037
BH-09	15	1/1/1990		0.032			0.73	nd									nd
BH-09	25	1/1/1990		nd			nd	0.17									nd
BH-10	10	1/1/1990		nd			nd	nd									nd
BH-10	20	1/1/1990		nd			nd	nd									nd
BH-11	25	1/1/1990		nd			nd	nd									nd
BH-11	30	1/1/1990		11			nd	nd									nd
BH-11	35	1/1/1990		1.4			nd	0.7									0.33
BH-12	10	1/1/1990		nd			nd	nd									nd
BH-12	20	1/1/1990		nd			nd	0.054									nd
BH-13	15	1/1/1990		nd			nd	nd									nd
BH-13	30	1/1/1990		nd			nd	nd									0.09
BH-13	40	1/1/1990		nd			0.3	0.15									0.23
BH-14	5	1/1/1990		4.5			nd	nd									nd
BH-14	10	1/1/1990		29			nd	nd									nd
BH-14	15	1/1/1990		9.3			nd	nd									8.9
BH-14	20	1/1/1990		44			nd	nd									48
BH-14	25	1/1/1990		17			nd	nd									19
BH-14	30	1/1/1990		nd			7.8	9.3									nd
BH-14	35	1/1/1990		nd			nd	6.3									nd
BH-14	40	1/1/1990		2.6			nd	nd									1.4
BH-15	1	1/5/1994		0.218	<.03		<.05	0.198							<.005		6.33
BH-15	5	1/5/1994		<.005	<.03		<.05	<.03							<.005		0.011
BH-15	10	1/5/1994		<.005	<.03		<.05	<.03							<.005		<.005
BH-15	20	1/5/1994		<.005	<.03		<.05	<.03							<.005		<.005
BH-16	1	1/6/1994		<.05	<.3		<.5	<.3							<.05		<.05
BH-16	5	1/6/1994		<.05	<.3		<.5	<.3							<.05		<.05
BH-16	10	1/6/1994		<.05	<.3		<.5	<.3							<.05		<.05
BH-16	20	1/6/1994		0.082	<.3		<.5	<.3							<.05		0.471
BH-17	1	1/11/1994		1.56	<.75		<1.25	2.05							<.25		41.8
BH-17	5	1/11/1994		6.33	<3		<5	11.6							<1		58.2
BH-17	10	1/11/1994		<.01	<.03		<.05	3.02							<.01		0.012
BH-17	20	1/11/1994		<.01	<.03		<.05	0.399							<.01		<.01
BSB-01	10	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	17.5	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	20	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	27.5	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	28	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.085	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	35	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	40	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	45	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-01	5	6/5/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-02	14	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0068
BSB-02	18	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-02	21	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-02	26.5	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Acetate	Vinyl Chloride	Xylenes(Total)
BH-01	15	1/1/1990	0.019			nd		nd					nd
BH-01	20	1/1/1990	0.021			0.018		nd					0.012
BH-02	10	1/1/1990	0.25			0.091		0.04					0.412
BH-02	15	1/1/1990	0.012			nd		nd					nd
BH-03	5	1/1/1990	0.44			0.019		0.01					0.45
BH-03	10	1/1/1990	0.16			nd		nd					0.07
BH-03	15	1/1/1990	0.028			nd		nd					nd
BH-03	20	1/1/1990	nd			nd		nd					nd
BH-04	5	1/1/1990	0.15			0.065		nd					nd
BH-04	15	1/1/1990	0.033			0.039		nd					nd
BH-04	20	1/1/1990	nd			nd		nd					nd
BH-05	5	1/1/1990	0.16			nd		nd					0.175
BH-05	10	1/1/1990	0.36			0.03		nd					0.163
BH-05	15	1/1/1990	0.035			nd		nd					0.015
BH-05	20	1/1/1990	0.012			nd		nd					nd
BH-06	5	1/1/1990	0.7			nd		0.016					0.32
BH-06	10	1/1/1990	0.04			nd		nd					0.013
BH-06	15	1/1/1990	1.9			0.23		0.06					2.3
BH-06	20	1/1/1990	0.15			0.029		nd					0.067
BH-06	25	1/1/1990	0.032			nd		nd					0.01
BH-06	30	1/1/1990	0.87			0.045		nd					1.65
BH-06	35	1/1/1990	0.026			nd		nd					0.012
BH-06	40	1/1/1990	0.82			0.72		0.033					0.53
BH-06	45	1/1/1990	1.6			0.9		0.087					2.57
BH-06	50	1/1/1990	0.065			0.018		nd					0.123
BH-07	10	1/1/1990	0.02			0.011		nd					0.013
BH-07	15	1/1/1990	nd			0.071		nd					nd
BH-07	20	1/1/1990	0.028			nd		nd					nd
BH-08	10	1/1/1990	nd			nd		nd					nd
BH-08	15	1/1/1990	nd			nd		nd					nd
BH-08	20	1/1/1990	nd			nd		nd					nd
BH-08	25	1/1/1990	nd			nd		nd					nd
BH-09	5	1/1/1990	0.41			0.056		0.02					0.25
BH-09	15	1/1/1990	0.19			nd		nd					0.161
BH-09	25	1/1/1990	nd			nd		nd					nd
BH-10	10	1/1/1990	nd			nd		nd					nd
BH-10	20	1/1/1990	nd			nd		nd					nd
BH-11	25	1/1/1990	0.059			nd		nd					0.05
BH-11	30	1/1/1990	10			1.2		0.076					24.3
BH-11	35	1/1/1990	1.9			1		nd					2.63
BH-12	10	1/1/1990	nd			nd		nd					nd
BH-12	20	1/1/1990	nd			nd		nd					nd
BH-13	15	1/1/1990	nd			nd		nd					nd
BH-13	30	1/1/1990	nd			0.21		nd					nd
BH-13	40	1/1/1990	0.098			0.28		0.12					0.06
BH-14	5	1/1/1990	67			nd		8.7					233
BH-14	10	1/1/1990	98			nd		8.4					112
BH-14	15	1/1/1990	27			2.3		nd					28.3
BH-14	20	1/1/1990	150			28		nd					128
BH-14	25	1/1/1990	37			nd		nd					52
BH-14	30	1/1/1990	3.3			nd		nd					1.9
BH-14	35	1/1/1990	1.6			nd		nd					nd
BH-14	40	1/1/1990	2.4			1.8		nd					8.3
BH-15	1	1/5/1994	1.3			20.9	<.005	0.027			<.03	<.03	43.2
BH-15	5	1/5/1994	0.024			0.109	<.005	<.005			<.03	<.03	0.023
BH-15	10	1/5/1994	0.006			0.005	<.005	<.005			<.03	<.03	<.005
BH-15	20	1/5/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
BH-16	1	1/6/1994	<.05			<.05	<.05	<.05			<.3	<.3	<.05
BH-16	5	1/6/1994	<.05			0.055	<.05	0.061			<.3	<.3	<.05
BH-16	10	1/6/1994	<.05			0.006	<.05	<.05			<.3	<.3	<.05
BH-16	20	1/6/1994	0.125			<.05	<.05	<.05			<.3	<.3	0.422
BH-17	1	1/11/1994	11.2			36.8	<.25	9.28			<.75	<.75	10.48
BH-17	5	1/11/1994	48.3			19.4	<1	5.63			<3	<3	27.77
BH-17	10	1/11/1994	0.179			0.055	<.01	0.021			<.03	<.03	0.024
BH-17	20	1/11/1994	<.01			<.01	<.01	<.01			<.03	<.03	<.01
BSB-01	10	6/5/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	17.5	6/5/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	20	6/5/2002	<.005	<.005	<.005	0.115	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	27.5	6/5/2002	<.005	<.005	<.005	0.55	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	28	6/5/2002	<.005	<.005	<.005	0.23	<.005	<.005	0.12	<.005	<.05	<.01	0.13
BSB-01	35	6/5/2002	<.005	<.005	<.005	0.095	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	40	6/5/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	45	6/5/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-01	5	6/5/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-02	14	6/6/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-02	18	6/6/2002	<.005	<.005	<.005	0.055	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-02	21	6/6/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-02	26.5	6/6/2002	<.005	<.005	<.005	0.0425	<.005	<.005	<.005	<.005	<.05	<.01	<.005

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

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Location	Depth	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	4-Chlorotoluene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,4-Dioxane
BSB-02	4	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.012	<.005	<.005	<.005	<.005	
BSB-02	9	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0056	<.005	<.005	<.005	<.005	
BSB-03	6.5	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0086	<.005	<.005	<.005	<.005	<.1
BSB-03	11.5	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-03	18	8/15/2002	<.1	<.01	<.1	<.01	<.02	<.02	<.01	<.01	<.01	0.325	0.014	<.01	0.195	<.01	<.2
BSB-03	19	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-03	27	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-03	28	8/15/2002	<12.5	<.25	<12.5	<.25	<2.5	<.25	<.25	<.25	<.25	<.25	2	<.25	<.25	<.25	<25
BSB-03	35	8/15/2002	<.1	0.0102	<.1	<.01	<.02	<.02	<.01	<.01	<.01	0.077	0.474	<.01	0.474	<.01	<.2
BSB-03	40	8/15/2002	<.25	<.025	<.25	<.025	<.05	<.05	<.025	<.025	<.025	0.152	0.25	<.025	0.66	<.025	<.5
BSB-04	6.5	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0368	<.005	<.005	0.049	<.005	<.1
BSB-04	12	8/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.207	<.005	<.005	0.34	<.005	<.1
BSB-04	17	8/15/2002	<.5	<.05	<.5	<.05	<.1	<.1	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<1
BSB-04	25	8/15/2002	3.8	<.05	<.5	<.05	<.1	<.1	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<1
BSB-04	26.5	8/15/2002	3.5	<.125	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	0.85	<.125	<.125	1.07	<.125	<2.5
BSB-04	34	8/15/2002	2.38	<.25	<2.5	<.25	<.5	<.5	<.25	<.25	<.25	2.21	0.875	<.25	10.2	<.25	<5
BSB-04	40	8/15/2002	<2.5	0.23	<2.5	<.25	<.5	<.5	<.25	<.25	<.25	0.895	1.78	<.25	0.76	<.25	<5
BSB-05	7	8/16/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-05	12	8/16/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-05	20	8/16/2002	6.3	<.125	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	<.125	<.125	<.125	0.565	<.125	<2.5
BSB-05	23	8/16/2002	7.7	<.125	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	<.125	<.125	<.125	0.405	<.125	<2.5
BSB-05	28	8/16/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-05	34	8/16/2002	<1.25	<.125	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	0.33	0.35	<.125	2	<.125	<2.5
BSB-05	37.5	8/16/2002	1.37	<.125	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	0.35	0.31	<.125	1.75	<.125	<2.5
BSB-05	40	8/16/2002	1.83	0.08	<1.25	<.125	<.25	<.25	<.125	<.125	<.125	0.19	0.27	<.125	1.19	<.125	<2.5
BSB-06	5	8/16/2002	36.5	<2.5	<25	<2.5	<5	<5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	8.35	<2.5	<5
BSB-06	9	8/16/2002	16.6	<.5	<5	<.5	<1	<1	<.5	<.5	<.5	<.5	<.5	<.5	1.15	<.5	<10
BSB-06	10	8/16/2002	173	<2.5	<25	<2.5	<5	<5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.69	<2.5	<5
BSB-06	15	8/16/2002	19.1	<1	<10	<1	<2	<2	<1	<1	<1	1.46	1	<1	10.4	<1	<20
BSB-06	15	8/16/2002	19.3	<1	<10	<1	<2	<2	<1	<1	<1	<1	<1	<1	0.96	<1	<20
BSB-06	15	8/16/2002	16.5	<1	<10	<1	<2	<2	<1	<1	<1	<1	<1	<1	2.04	<1	<20
BSB-06	19	8/16/2002	7.87	<.5	<5	<.5	<1	<1	<.5	<.5	<.5	<.5	<.5	<.5	9.85	<.5	<10
BSB-06	25	8/16/2002	14.4	<1.25	<12.5	<1.25	<2.5	<2.5	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	1.79	<1.25	<25
BSB-06	30	8/16/2002	10.9	<.5	<5	<.5	<1	<1	<.5	<.5	<.5	<.5	<.5	<.5	5.71	<.5	<10
BSB-06	34	8/16/2002	31.3	<1.25	<12.5	<1.25	<2.5	<2.5	<1.25	<1.25	<1.25	4.93	4.95	<1.25	9.15	<1.25	<25
BSB-06	40	8/16/2002	39.4	<.5	<5	<.5	<1	<1	<.5	<.5	<.5	1.42	0.58	<.5	4.12	<.5	<10
BSB-07	15	8/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	5.8	<.005	<.1
BSB-07	17	8/19/2002	2.97	<.005	5.32	<.005	<.01	<.01	<.005	<.005	<.005	0.44	<.005	<.005	<.005	<.005	<.1
BSB-07	2.5	8/19/2002	1.2	<.005	4.89	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-07	22.5	8/19/2002	3.64	<.005	6.1	<.005	<.01	<.01	<.005	<.005	<.005	0.44	<.005	<.005	<.005	<.005	<.1
BSB-07	27.5	8/19/2002	1.21	<.005	4.72	<.005	<.01	<.01	<.005	<.005	<.005	0.355	<.005	<.005	<.005	<.005	<.1
BSB-07	30	8/19/2002	34.3	0.22	17.1	<.005	<.01	<.01	<.005	<.005	<.005	2.14	0.848	<.005	12.3	<.005	<.1
BSB-07	33	8/19/2002	72.5	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	34.5	<.005	<.1
BSB-07	40	8/19/2002	1.95	0.075	7.85	<.005	<.01	<.01	<.005	<.005	<.005	0.985	0.375	<.005	1.27	<.005	<.1
BSB-07	41.5	8/19/2002	0.842	0.0119	0.442	<.005	<.01	<.01	<.005	<.005	<.005	0.167	0.018	<.005	0.0721	<.005	<.1
BSB-07	7.5	8/19/2002	1.2	<.005	5.75	<.005	<.01	<.01	<.005	<.005	<.005	0.188	<.005	<.005	0.795	<.005	<.1
BSB-08	10	8/19/2002	76	<.005	50	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.42	<.005	<.1
BSB-08	13	8/19/2002	81	<.005	43.5	<.005	<.01	<.01	<.005	<.005	<.005	0.25	<.005	<.005	0.665	<.005	<.1
BSB-08	18	8/19/2002	11.1	<.005	12.5	<.005	<.01	<.01	<.005	<.005	<.005	0.4	<.005	<.005	<.005	<.005	<.1
BSB-08	27.5	8/19/2002	5.17	<.005	7.1	<.005	<.01	<.01	<.005	<.005	<.005	0.286	<.005	<.005	<.005	<.005	<.1
BSB-08	31	8/19/2002	27.6	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	5.4	<.005	<.005	4.1	<.005	<.1
BSB-08	35	8/19/2002	19.5	0.085	13.1	<.005	<.01	<.01	<.005	<.005	<.005	0.335	0.285	<.005	1.82	<.005	<.1
BSB-08	40	8/19/2002	12.3	<.005	13.9	<.005	<.01	<.01	<.005	<.005	<.005	1.02	0.437	<.005	1.97	<.005	<.1
BSB-08	45	8/19/2002	8.4	<.005	14.7	<.005	<.01	<.01	<.005	<.005	<.005	1.58	0.355	<.005	1.52	<.005	<.1
BSB-08	5	8/19/2002	32.7	<.005	25.7	<.005	<.01	<.01	<.005	<.005	<.005	0.29	<.005	<.005	0.65	<.005	<.1
BSB-09	15	8/20/2002	24.3	1.57	10.4	<.005	<.01	<.01	<.005	<.005	<.005	1.13	<.005	<.005	0.258	<.005	<.1
BSB-09	17	8/20/2002	9.9	0.285	9.85	<.005	<.01	<.01	<.005	<.005	<.005	0.17	<.005	<.005	0.0625	<.005	<.1
BSB-09	22.5	8/20/2002	5.45	0.13	9.5	<.005	<.01	<.01	<.005	<.005	<.005	0.057	0.085	<.005	0.057	<.005	<.1
BSB-09	24	8/20/2002	4.65	<.005	11.2	<.005	<.01	<.01	<.005	<.005	<.005	<.005	0.277	<.005	<.005	<.005	<.1
BSB-09	27.5	8/20/2002	23.2	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	3.78	<.005	3.6	<.005	<.1
BSB-09	32.5	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-09	35	8/20/2002	1.91	0.11	4.67	<.005	<.01	<.01	<.005	<.005	<.005	0.05	0.26	<.005	<.005	<.005	<.1
BSB-09	40	8/20/2002	1.85	0.065	3.95	<.005	<.01	<.01	<.005	<.005	<.005	<.005	0.25	<.005	0.165	<.005	<.1
BSB-09	5	8/20/2002	5.85	<.005	12	<.005	<.01	<.01	<.005	<.005	<.005	0.9	<.005	<.005	<.005	<.005	<.1
BSB-09	8	8/20/2002	60	<.005	30	<.005	<.01	<.01	<.005	<.005	<.005	2.2	<.005	<.005	<.005	<.005	<.1
BSB-10	12.5	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.026	0.0115	<.005	0.135	<.005	<.1
BSB-10	16	8/20/2002	2.9	<.005	7.73	<.005	<.01	<.01	<.005	<.005	<.005	0.165	<.005	<.005	1.49	<.005	<.1
BSB-10	2	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-10	22.5	8/20/2002	0.4	<.005	0.125	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.024	<.005	<.1
BSB-10	27.5	8/20/2002	3.69	<.005	7.35	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.235	<.005	<.1
BSB-10	30	8/20/2002	2.63	<.005	8.53	<.005	<.01	<.01	<.005	<.005	<.005	0.232	0.525	<.005	0.218	<.005	<.1
BSB-10	35	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.045	0.0525	<.005	0.016	<.005	<.1
BSB-10	40	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.027	0.02	<.005	0.0135	<.005	<.1
BSB-10	7.5	8/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.125	<.005	<.005	0.575	<.005	<.1
BSB-11	14.5	11/11/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-11	19.5	11/11/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.846	<.005	<.005	0.365	<.005	<.1
BSB-11	24.5	11/11/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.529	<.005	<.005	0.194	<.005	<.1
BSB-11	29.5	11/11/2002	1.84	<.005	6.39	<.005	<.01	<.01	<.005	<.005	<.005	11.3	0.406	<.005	5.48	<.005	<.1

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	DIPE	Ethylbenzene	2-Hexanone	Isopropylbenzene	Methylene Chloride	4-Methyl-2-Pentanone	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
BSB-02	4	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-02	9	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-03	6.5	8/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-03	11.5	8/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-03	18	8/15/2002	0.01	<.01	<.1	<.01	<.01	<.1	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
BSB-03	19	8/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-03	27	8/15/2002	<.005	0.18	<.05	<.005	<.005	<.05	<.005	<.005	<.005	0.46	<.005	<.005	<.005	<.005	<.005
BSB-03	28	8/15/2002	<.25	18.4	<12.5	1.85	1.28	<12.5	<.25	2.35	2.38	3.65	<.25	<.25	<.25	<.25	<.25
BSB-03	35	8/15/2002	<.01	<.01	<.1	0.022	<.01	<.1	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	0.294
BSB-03	40	8/15/2002	<.025	<.025	<.25	<.025	<.025	<.25	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	0.255
BSB-04	6.5	8/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0094
BSB-04	12	8/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-04	17	8/15/2002	<.05	<.05	<.5	<.05	<.05	<.5	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
BSB-04	25	8/15/2002	<.05	<.05	<.5	<.05	<.05	<.5	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05
BSB-04	26.5	8/15/2002	<.125	0.055	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-04	34	8/15/2002	<.25	1.12	<2.5	<.25	<.25	<2.5	<.25	<.25	<.25	<.25	<.25	<.25	<.25	<.25	<.25
BSB-04	40	8/15/2002	<.25	1.25	<2.5	<.25	<.25	<2.5	<.25	0.375	0.26	2.27	<.25	<.25	<.25	<.25	0.53
BSB-05	7	8/16/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-05	12	8/16/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-05	20	8/16/2002	<.125	<.125	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-05	23	8/16/2002	<.125	<.125	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-05	28	8/16/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-05	34	8/16/2002	<.125	<.125	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-05	37.5	8/16/2002	<.125	<.125	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-05	40	8/16/2002	<.125	0.195	<1.25	<.125	<.125	<1.25	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125
BSB-06	5	8/16/2002	<2.5	4.55	<25	1.65	6	<25	<2.5	217	7.2	9.55	7.1	4.75	<2.5	<2.5	827
BSB-06	9	8/16/2002	<.5	<.5	<5	<.5	2.88	<5	<.5	9.25	4.91	3.92	<.5	<.5	<.5	<.5	24
BSB-06	10	8/16/2002	<2.5	<2.5	<25	<2.5	7.96	<25	<2.5	3.07	0.89	<2.5	<2.5	<2.5	<2.5	<2.5	14
BSB-06	15	8/16/2002	<1	1.82	<10	<1	19.6	<10	<1	40	9.84	12.1	<1	<1	<1	<1	462
BSB-06	15	8/16/2002	<1	<1	<10	<1	3.8	<10	<1	11	5.12	<1	<1	<1	<1	<1	23.4
BSB-06	15	8/16/2002	<1	1.2	<10	<1	<1	<10	<1	10.2	3.2	4.86	<1	<1	<1	<1	12
BSB-06	19	8/16/2002	<.5	2.8	<5	0.608	1.34	<5	<.5	40	17.6	1.68	<.5	<.5	<.5	<.5	302
BSB-06	25	8/16/2002	<1.25	1.48	<12.5	<1.25	<1.25	<12.5	<1.25	10.2	4.41	0.38	<1.25	<1.25	<1.25	<1.25	16.1
BSB-06	30	8/16/2002	<.5	3.65	<5	0.588	<.5	<5	<.5	27.6	12.6	1.54	<.5	0.707	<.5	<.5	1.15
BSB-06	34	8/16/2002	<1.25	14.4	<12.5	1.1	5.8	<12.5	<1.25	34	93	2.43	1.48	<1.25	<1.25	<1.25	20.9
BSB-06	40	8/16/2002	<.5	<.5	<5	<.5	<.5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
BSB-07	15	8/19/2002	<.005	143	<.05	13.8	<.005	<.05	<.005	18	9	34.4	<.005	<.005	<.005	<.005	210
BSB-07	17	8/19/2002	<.005	1.06	<.05	<.005	<.005	<.05	<.005	1.32	0.7	0.846	<.005	<.005	<.005	<.005	<.005
BSB-07	2.5	8/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.07	<.005	<.005	<.005	<.005	<.005	<.005	0.06
BSB-07	22.5	8/19/2002	<.005	3.88	<.05	0.76	<.005	<.05	<.005	1.9	1.12	2.24	<.005	<.005	<.005	<.005	<.005
BSB-07	27.5	8/19/2002	<.005	3.05	<.05	<.005	<.005	<.05	<.005	0.795	0.535	1.34	<.005	<.005	<.005	<.005	<.005
BSB-07	30	8/19/2002	<.005	18.3	<.05	2.2	<.005	3.78	<.005	2.44	1.76	5.84	<.005	<.005	<.005	<.005	12
BSB-07	33	8/19/2002	<.005	60.5	<.05	13.5	<.005	<.05	<.005	13	12.5	41	<.005	<.005	<.005	<.005	13.5
BSB-07	40	8/19/2002	<.005	0.59	<.05	<.005	<.005	<.05	<.005	<.005	<.005	0.125	<.005	<.005	<.005	<.005	<.005
BSB-07	41.5	8/19/2002	<.005	<.005	<.05	<.005	<.005	0.203	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-07	7.5	8/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.107	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	10	8/19/2002	<.005	0.08	<.05	<.005	<.005	1.59	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	13	8/19/2002	<.005	0.14	<.05	<.005	<.005	2.13	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	18	8/19/2002	<.005	1.25	<.05	<.005	<.005	<.05	<.005	0.925	<.005	0.575	<.005	<.005	<.005	<.005	<.005
BSB-08	27.5	8/19/2002	<.005	1.68	<.05	2.6	<.005	<.05	<.005	1.09	0.649	0.786	<.005	<.005	<.005	<.005	<.005
BSB-08	31	8/19/2002	<.005	8.6	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	35	8/19/2002	<.005	1.02	<.05	0.15	<.005	<.05	<.005	0.24	0.14	0.357	<.005	<.005	<.005	<.005	0.36
BSB-08	40	8/19/2002	<.005	0.367	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	45	8/19/2002	<.005	0.472	<.05	<.005	<.005	1.8	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-08	5	8/19/2002	<.005	0.235	<.05	<.005	<.005	1.77	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-09	15	8/20/2002	<.005	1.44	<.05	<.005	<.005	<.05	<.005	4.76	1.55	0.652	<.005	<.005	<.005	<.005	2.44
BSB-09	17	8/20/2002	<.005	0.323	<.05	<.005	<.005	<.05	<.005	0.99	0.34	0.15	<.005	<.005	<.005	<.005	0.427
BSB-09	22.5	8/20/2002	<.005	0.15	<.05	<.005	<.005	<.05	<.005	0.425	0.125	<.005	<.005	<.005	<.005	<.005	0.145
BSB-09	24	8/20/2002	<.005	1.05	<.05	<.005	<.005	<.05	<.005	0.459	0.25	<.005	<.005	<.005	<.005	<.005	<.005
BSB-09	27.5	8/20/2002	<.005	40.8	<.05	4.4	<.005	<.05	<.005	14.8	9.4	4.4	<.005	<.005	<.005	<.005	9.2
BSB-09	32.5	8/20/2002	<.005	3.25	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-09	35	8/20/2002	<.005	0.125	<.05	<.005	<.005	<.05	<.005	0.16	0.05	0.06	<.005	<.005	<.005	<.005	0.09
BSB-09	40	8/20/2002	<.005	0.082	<.05	<.005	<.005	<.05	<.005	0.07	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-09	5	8/20/2002	<.005	6.55	<.05	<.005	<.005	<.05	<.005	23.9	8.7	3.35	<.005	<.005	<.005	<.005	13.7
BSB-09	8	8/20/2002	<.005	14.3	<.05	<.005	<.005	<.05	<.005	31	13.8	3.9	<.005	<.005	<.005	<.005	26
BSB-10	12.5	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.025
BSB-10	16	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-10	2	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.658
BSB-10	22.5	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-10	27.5	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-10	30	8/20/2002	<.005	0.0425	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-10	35	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.007
BSB-10	40	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-10	7.5	8/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.605	<.005	<.005	<.005	<.005	<.005	<.005	1.1
BSB-11	14.5	11/11/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-11	19.5	11/11/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-11	24.5	11/11/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-11	29.5	11/11/2002	<.005	0.409	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Acetate	Vinyl Chloride	Xylenes(Total)
BSB-02	4	6/6/2002	<.005	<.005	<.005	0.011	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-02	9	6/6/2002	<.005	<.005	<.005	0.0056	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-03	6.5	8/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-03	11.5	8/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-03	18	8/15/2002	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.1	<.02	<.01
BSB-03	19	8/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-03	27	8/15/2002	0.085	<.005	<.005	<.005	<.005	<.005	0.975	0.265	<.05	<.01	0.545
BSB-03	28	8/15/2002	12.1	<.25	<.25	<.25	3.98	<.25	40.3	10.4	<12.5	<2.5	81
BSB-03	35	8/15/2002	0.0032	<.01	<.01	<.01	<.01	0.45	<.01	<.01	<.1	<.02	<.01
BSB-03	40	8/15/2002	<.025	<.025	<.025	<.025	<.025	0.255	<.025	<.025	<.25	0.09	<.025
BSB-04	6.5	8/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-04	12	8/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-04	17	8/15/2002	0.195	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.5	<.1	0.12
BSB-04	25	8/15/2002	0.08	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.5	<.1	<.05
BSB-04	26.5	8/15/2002	0.54	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<1.25	<.25	<.21
BSB-04	34	8/15/2002	0.6	<.25	<.25	<.25	<.25	<.25	1.95	0.46	<2.5	<.5	4.88
BSB-04	40	8/15/2002	4.55	<.25	<.25	1.01	<.25	1.35	3.83	0.965	<2.5	<.5	4.72
BSB-05	7	8/16/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-05	12	8/16/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-05	20	8/16/2002	<.125	<.125	<.125	<.125	<.125	0.153	<.125	<.125	<1.25	<.25	0.15
BSB-05	23	8/16/2002	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<.125	<1.25	<.25	<.125
BSB-05	28	8/16/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-05	34	8/16/2002	<.125	<.125	<.125	<.125	<.125	<.125	0.965	0.165	<1.25	<.25	<.125
BSB-05	37.5	8/16/2002	<.125	<.125	<.125	<.125	<.125	<.125	0.85	0.175	<1.25	<.25	<.125
BSB-05	40	8/16/2002	0.225	<.125	<.125	<.125	<.125	<.125	0.86	0.195	<1.25	<.25	0.5
BSB-06	5	8/16/2002	6	<2.5	<2.5	36.8	<2.5	100	474	70.5	<25	<5	27.8
BSB-06	9	8/16/2002	0.487	<.5	<.5	1.58	<.5	7.15	24.2	2.88	<5	<1	0.82
BSB-06	10	8/16/2002	0.225	<2.5	<2.5	1.46	<2.5	4.67	<2.5	0.5	<25	<5	0.36
BSB-06	15	8/16/2002	8.2	<1	<1	80	<1	42.2	80.7	6.68	<10	<2	7.78
BSB-06	15	8/16/2002	0.4	<1	<1	1.4	<1	5.64	23.2	2.48	<10	<2	0.6
BSB-06	15	8/16/2002	2.86	<1	<1	2.46	<1	0.656	24.4	3.52	<10	<2	4.84
BSB-06	19	8/16/2002	14	<.5	<.5	30.3	<.5	15	84	10.3	<5	<1	12.2
BSB-06	25	8/16/2002	3.21	<1.25	<1.25	2.54	<1.25	0.69	21.7	2.94	<12.5	<2.5	5.6
BSB-06	30	8/16/2002	9.54	<.5	<.5	10	<.5	<.5	54.2	7.34	<5	<1	14.4
BSB-06	34	8/16/2002	56.5	<1.25	<1.25	26.3	4.08	105	93	13.3	<12.5	<2.5	55.8
BSB-06	40	8/16/2002	1.76	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<5	<1	0.44
BSB-07	15	8/19/2002	574	<.005	<.005	61.6	139	13.2	224	59	<.05	<.01	872
BSB-07	17	8/19/2002	1.24	<.005	<.005	<.005	<.005	<.005	10.6	2.56	<.05	<.01	7.6
BSB-07	2.5	8/19/2002	0.06	<.005	<.005	<.005	<.005	<.005	0.195	0.06	<.05	<.01	0.28
BSB-07	22.5	8/19/2002	7.1	<.005	<.005	<.005	3.36	<.005	22.4	5.8	<.05	<.01	26.8
BSB-07	27.5	8/19/2002	5.3	<.005	<.005	<.005	2.25	<.005	12.2	3.15	<.05	<.01	18.8
BSB-07	30	8/19/2002	102	<.005	<.005	16.8	18.4	1.4	40.2	11.5	<.05	<.01	106
BSB-07	33	8/19/2002	441	<.005	<.005	78	88.5	41.5	252	78	<.05	<.01	308
BSB-07	40	8/19/2002	8.6	<.005	<.005	0.775	<.005	<.005	0.485	<.005	<.05	<.01	2.77
BSB-07	41.5	8/19/2002	0.111	<.005	<.005	<.005	<.005	<.005	0.025	<.005	<.05	<.01	0.055
BSB-07	7.5	8/19/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.155	<.005	<.05	<.01	0.1
BSB-08	10	8/19/2002	1.41	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.425
BSB-08	13	8/19/2002	2.74	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.755
BSB-08	18	8/19/2002	2.3	<.005	<.005	<.005	1.45	<.005	6.88	1.75	<.05	<.01	6.55
BSB-08	27.5	8/19/2002	2.4	<.005	<.005	<.005	1.81	<.005	8.84	2.29	<.05	<.01	7.9
BSB-08	31	8/19/2002	34.6	<.005	<.005	<.005	<.005	<.005	18.6	5	<.05	<.01	32
BSB-08	35	8/19/2002	0.25	<.005	<.005	<.005	0.76	0.18	3.08	0.87	<.05	<.01	3.57
BSB-08	40	8/19/2002	1.71	<.005	<.005	<.005	<.005	<.005	0.838	<.005	<.05	<.01	1.14
BSB-08	45	8/19/2002	2.19	<.005	<.005	<.005	<.005	<.005	1.85	0.548	<.05	<.01	1.11
BSB-08	5	8/19/2002	1.95	<.005	<.005	<.005	<.005	<.005	0.615	<.005	<.05	<.01	1.23
BSB-09	15	8/20/2002	2.36	<.005	<.005	19.8	<.005	0.845	9.37	1.6	<.05	<.01	7.88
BSB-09	17	8/20/2002	0.572	<.005	<.005	2.38	0.57	0.177	1.99	0.353	<.05	<.01	1.7
BSB-09	22.5	8/20/2002	0.315	<.005	<.005	0.595	<.005	0.08	0.77	0.145	<.05	<.01	0.925
BSB-09	24	8/20/2002	1.28	<.005	<.005	0.783	<.005	0.358	2.47	0.536	<.05	<.01	7.17
BSB-09	27.5	8/20/2002	93.4	<.005	<.005	306	36.6	64	113	2.7	<.05	<.01	205
BSB-09	32.5	8/20/2002	7.7	<.005	<.005	37.6	3.45	5.55	8.89	2.11	<.05	<.01	15.4
BSB-09	35	8/20/2002	0.23	<.005	<.005	0.23	<.005	0.095	0.365	0.08	<.05	<.01	0.42
BSB-09	40	8/20/2002	0.25	<.005	<.005	0.06	<.005	<.005	0.175	<.005	<.05	<.01	0.255
BSB-09	5	8/20/2002	6.6	<.005	<.005	36.5	2.25	4.4	51.5	3.35	<.05	<.01	40.2
BSB-09	8	8/20/2002	12.9	<.005	<.005	176	4	4.36	76.4	10.9	<.05	<.01	81.3
BSB-10	12.5	8/20/2002	<.005	<.005	<.005	0.132	<.005	0.0693	0.0408	<.005	<.05	<.01	<.005
BSB-10	16	8/20/2002	0.155	0.19	<.005	0.342	<.005	<.005	0.308	0.0975	<.05	<.01	0.142
BSB-10	2	8/20/2002	<.005	<.005	<.005	0.0271	<.005	0.0634	<.005	<.005	<.05	<.01	<.005
BSB-10	22.5	8/20/2002	0.0075	<.005	<.005	0.014	<.005	<.005	<.005	<.005	<.05	<.01	0.005
BSB-10	27.5	8/20/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.21	<.005	<.05	<.01	<.005
BSB-10	30	8/20/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.0975
BSB-10	35	8/20/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-10	40	8/20/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-10	7.5	8/20/2002	0.06	<.005	<.005	0.51	<.005	1.02	1.23	0.125	<.05	<.01	<.005
BSB-11	14.5	11/11/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-11	19.5	11/11/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-11	24.5	11/11/2002	0.357	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.136
BSB-11	29.5	11/11/2002	0.244	<.005	<.005	<.005	<.005	<.005	0.235	<.005	<.05	<.01	1.8

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	4-Chlorotoluene	1,2-Dibromo-3-Chloropropan	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,4-Dioxane
BSB-11	34.5	11/11/2002	2.1	0.065	<.05	<.005	<.01	<.01	<.005	0.194	<.005	2.97	0.745	<.005	5.6	<.005	<.1
BSB-11	39.5	11/11/2002	39.7	0.0775	23.4	<.005	<.01	<.01	<.005	<.005	<.005	1.23	0.926	<.005	6.71	<.005	<.1
BSB-11	42	11/11/2002	<.05	0.226	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.78	1.58	<.005	3.64	<.005	<.1
BSB-11	44	11/11/2002	2.44	0.129	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	0.989	<.005	0.425	<.005	<.1
BSB-11	9.5	11/11/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-12	10	11/11/2002	13.6	<.005	15.4	<.005	<.01	<.01	<.005	<.005	<.005	0.75	0.173	<.005	4.47	<.005	<.1
BSB-12	14.5	11/11/2002	46.2	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	7.66	8.04	<.005	18.3	<.005	<.1
BSB-12	19.5	11/11/2002	4.23	<.005	1.75	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.366	<.005	<.1
BSB-12	24.5	11/11/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	4.36	<.005	<.1
BSB-12	28.5	11/11/2002	4.79	<.005	2.77	<.005	<.01	<.01	<.005	<.005	<.005	0.671	0.242	<.005	7.94	<.005	<.1
BSB-12	34.5	11/11/2002	17.9	<.005	8.63	<.005	<.01	<.01	<.005	<.005	<.005	2.5	2.2	<.005	2.66	<.005	<.1
BSB-12	39.5	11/11/2002	43	<.005	52.5	<.005	<.01	<.01	<.005	<.005	<.005	3.28	3.46	<.005	<.005	<.005	<.1
BSB-12	44.5	11/11/2002	0.048	0.0139	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.586	0.957	<.005	0.083	<.005	<.1
BSB-12	9	11/11/2002	9.6	<.005	13	<.005	<.01	<.01	<.005	<.005	<.005	0.676	0.16	<.005	3.77	<.005	<.1
BSB-13	14.5	11/12/2002	39	0.105	14.7	0.0963	<.01	2.86	<.005	<.005	<.005	0.689	<.005	<.005	2.52	<.005	4.64
BSB-13	19.5	11/12/2002	12.3	0.0296	6.14	<.005	<.01	<.01	<.005	<.005	<.005	0.929	<.005	<.005	1.07	<.005	<.1
BSB-13	25	11/12/2002	9.04	<.005	5.46	<.005	<.01	<.01	<.005	<.005	<.005	0.34	<.005	<.005	0.294	<.005	<.1
BSB-13	27	11/12/2002	69.5	<.005	12.5	<.005	<.01	<.01	<.005	<.005	<.005	2.21	<.005	<.005	5.7	<.005	<.1
BSB-13	29.5	11/12/2002	29.1	0.197	13	0.532	<.01	<.01	<.005	<.005	<.005	1.12	0.37	<.005	10.9	<.005	<.1
BSB-13	30	11/12/2002	31.5	0.199	15.4	0.456	<.01	<.01	<.005	<.005	<.005	1.1	0.46	<.005	11.7	<.005	<.1
BSB-13	32	11/12/2002	5.82	<.005	6.5	<.005	<.01	<.01	<.005	<.005	<.005	1.18	0.396	<.005	7.09	<.005	<.1
BSB-13	34.5	11/12/2002	3.57	<.005	5.25	<.005	<.01	<.01	<.005	<.005	<.005	1.7	0.947	<.005	3.55	<.005	<.1
BSB-13	39.5	11/12/2002	2.46	<.005	3.96	<.005	<.01	<.01	<.005	<.005	<.005	2.34	0.38	<.005	2.11	<.005	<.1
BSB-13	4.5	11/12/2002	44.7	0.31	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-13	9.5	11/12/2002	32.5	0.056	9.43	<.005	0.168	<.01	<.005	<.005	<.005	0.285	<.005	<.005	0.758	<.005	27.3
BSB-14	14.5	11/12/2002	1.05	<.005	2.63	<.005	<.01	<.01	<.005	<.005	<.005	1.13	1.05	<.005	0.264	<.005	<.1
BSB-14	19.5	11/12/2002	1	<.005	2.54	<.005	<.01	<.01	<.005	<.005	<.005	0.065	0.095	<.005	0.11	<.005	<.1
BSB-14	27	11/12/2002	0.222	0.00865	0.059	0.0049	<.01	<.01	<.005	<.005	<.005	0.0916	0.225	<.005	0.335	<.005	<.1
BSB-14	28.5	11/12/2002	1.23	0.025	1.8	<.005	<.01	<.01	<.005	<.005	<.005	0.035	0.213	<.005	<.005	<.005	<.1
BSB-14	29	11/12/2002	0.418	0.0137	0.299	<.005	<.01	<.01	<.005	<.005	<.005	0.0267	0.251	<.005	0.0274	<.005	<.1
BSB-14	33	11/12/2002	0.054	0.0154	0.037	<.005	<.01	<.01	<.005	<.005	<.005	0.109	0.635	<.005	0.142	<.005	<.1
BSB-14	39.5	11/12/2002	0.966	0.203	2.8	<.005	<.01	<.01	<.005	<.005	<.005	0.634	1.4	<.005	0.108	<.005	<.1
BSB-14	42	11/12/2002	0.083	0.0032	0.046	<.005	<.01	<.01	<.005	<.005	<.005	0.108	0.327	<.005	0.0193	<.005	<.1
BSB-14	9.5	11/12/2002	1.43	<.005	3.85	<.005	<.01	<.01	<.005	<.005	<.005	0.461	0.297	<.005	0.094	<.005	<.1
BSB-16	10	11/13/2002	46	<.005	8.64	<.005	<.01	<.01	0.00942	<.005	<.005	<.005	<.005	<.005	0.0084	<.005	<.1
BSB-16	14.5	11/13/2002	4.1	<.005	2.97	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-16	19.5	11/13/2002	0.201	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-16	22	11/13/2002	0.138	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.0075	<.005	<.1
BSB-16	24.5	11/13/2002	5.98	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	1.33	<.005	<.1
BSB-16	29.5	11/13/2002	5.22	<.005	2.5	<.005	<.01	<.01	<.005	<.005	<.005	<.005	1.04	<.005	1.83	<.005	<.1
BSB-16	34.5	11/13/2002	0.0266	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.164	0.341	<.005	0.181	<.005	<.1
BSB-16	39.5	11/13/2002	<.05	0.0148	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.101	0.179	<.005	0.378	<.005	<.1
BSB-16	4.5	11/13/2002	7.3	<.005	7.66	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
BSB-16	44.5	11/13/2002	<.05	0.019	<.05	0.0084	<.01	<.01	<.005	<.005	<.005	0.202	0.238	<.005	0.658	0.00537	<.1
BSB-16	49.5	11/13/2002	<.05	<.005	<.05	0.0184	<.01	<.01	<.005	<.005	<.005	0.254	0.18	<.005	0.698	<.005	<.1
BSB-16	9	11/13/2002	39.4	<.005	8.64	<.005	<.01	<.01	0.007	<.005	<.005	<.005	<.005	<.005	0.0072	<.005	<.1
BSB-17	0	11/14/2002	49.3	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	42.7	<.005	<.1
BSB-17	10	11/14/2002	16.3	<.005	<.05	<.005	<.01	<.01	<.005	<.005	3.48	<.005	<.005	<.005	0.664	<.005	<.1
BSB-17	14	11/14/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	30	<.005	<.005	<.005	23.6	<.005	<.1
BSB-17	15	11/14/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	34.4	<.005	<.005	<.005	19.4	<.005	<.1
BSB-17	20	11/14/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	27.7	<.005	<.005	19.8	<.005	<.1
BSB-17	22.5	11/14/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	3.79	<.005	<.005	2.73	<.005	<.1
BSB-17	25	11/14/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	4.9	<.005	<.005	2.69	<.005	<.1
BSB-17	27.5	11/14/2002	20.8	<.005	7.65	<.005	<.01	<.01	<.005	<.005	<.005	16.2	2.27	<.005	20.4	<.005	<.1
BSB-17	30	11/14/2002	24.2	<.005	9	<.005	<.01	<.01	<.005	<.005	<.005	6.69	1.14	<.005	14.4	<.005	<.1
BSB-17	35	11/14/2002	28.4	<.005	10	<.005	<.01	<.01	<.005	<.005	<.005	2.11	<.005	<.005	8.46	<.005	<.1
BSB-17	40	11/14/2002	58	0.179	18.5	<.005	<.01	<.01	<.005	<.005	<.005	0.916	0.63	<.005	6.82	<.005	<.1
BSB-17	45	11/14/2002	18.8	0.101	7.5	<.005	<.01	<.01	<.005	<.005	<.005	0.336	0.282	<.005	1.86	<.005	<.1
E-11	1.5	3/18/2003	3.88	<.001	0.095	<.005	<.005	<.005	<.005	<.005	<.005	0.0083	<.005	<.005	0.0171	<.005	<.1
E-11	10	3/18/2003	2.67	<.001	0.351	<.005	<.005	<.005	<.005	<.005	<.005	0.034	<.005	<.005	0.327	<.005	1.7
E-11	15	3/18/2003	4.15	<.001	0.778	<.005	<.005	<.005	<.005	<.005	<.005	0.034	<.005	<.005	0.246	<.005	5.03
E-11	19.5	3/18/2003	2.26	<.001	0.451	<.005	<.005	<.005	<.005	<.005	<.005	0.0064	<.005	<.005	0.035	<.005	3.41
E-11	25	3/18/2003	16.7	<.001	10.9	<.005	<.005	<.005	<.005	<.005	<.005	0.33	<.005	<.005	3.56	<.005	3.19
E-11	30	3/18/2003	47.1	<.001	27.5	######	<.005	<.005	<.005	<.005	<.005	0.674	0.374	<.005	8.56	<.005	3.31
E-11	35	3/18/2003	0.551	0.0138	0.526	0.0098	<.005	<.005	<.005	<.005	<.005	0.182	0.163	<.005	1.79	<.005	2.34
E-11	40	3/18/2003	0.11	0.0214	<.025	0.01	<.005	<.005	<.005	<.005	<.005	0.26	0.13	<.005	0.787	<.005	<.1
E-11	5	3/18/2003	2.12	<.001	0.17	<.005	<.005	<.005	<.005	<.005	<.005	0.014	<.005	<.005	0.061	<.005	<.1
E-12	1.5	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
E-12	10	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
E-12	15	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	#######	<.005	<.1
E-12	16	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	#######	<.005	<.1
E-12	20	3/18/2003	1.42	<.001	6.36	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	#######	<.005	<.1
E-12	25	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	1.46	<.005	<.1
E-12	25.5	3/18/2003	0.985	<.001	4.75	<.005	<.005	<.005	<.005	<.005	<.005	0.162	<.005	<.005	2.9	<.005	<.1
E-12	5	3/18/2003	<.025	<.001	<.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.009	<.005	0.176
MW-01	10	1/1/1990	21	nd	nd							nd	nd				
MW-01	15	1/1/1990	7.9	nd	nd							0.021	0.092				
MW-01	20	1/1/1990	8.4	nd	nd							nd	nd				

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	DIPE	Ethylbenzene	2-Hexanone	Isopropylbenzene	Methylene Chloride	4-Methyl-2-Pentanone	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
BSB-11	34.5	11/11/2002	<.005	0.903	<.05	0.218	<.005	<.05	<.005	0.212	<.005	0.405	<.005	<.005	<.005	<.005	<.005
BSB-11	39.5	11/11/2002	<.005	0.267	1.75	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-11	42	11/11/2002	<.005	4.11	<.05	1.18	<.005	<.05	<.005	0.432	0.91	3.01	<.005	<.005	<.005	<.005	1.95
BSB-11	44	11/11/2002	<.005	0.255	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.18
BSB-11	9.5	11/11/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-12	10	11/11/2002	<.005	0.0515	<.05	<.005	3.72	0.468	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-12	14.5	11/11/2002	<.005	28.2	<.05	<.005	107	<.05	<.005	18.9	14.6	49.7	<.005	<.005	<.005	<.005	355
BSB-12	19.5	11/11/2002	<.005	0.485	<.05	<.005	<.005	<.05	<.005	1.25	0.899	1.86	<.005	<.005	<.005	<.005	<.005
BSB-12	24.5	11/11/2002	<.005	4.7	<.05	<.005	<.005	<.05	<.005	13.1	4.57	13.7	<.005	<.005	<.005	<.005	<.005
BSB-12	28.5	11/11/2002	<.005	0.17	<.05	<.005	0.289	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-12	34.5	11/11/2002	<.005	2.35	<.05	<.005	11.5	1.74	<.005	2.59	1.88	3.83	<.005	<.005	<.005	<.005	13
BSB-12	39.5	11/11/2002	<.005	<.005	<.05	<.005	23.4	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-12	44.5	11/11/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.285
BSB-12	9	11/11/2002	<.005	0.0635	<.05	<.005	4	0.525	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-13	14.5	11/12/2002	<.005	<.005	<.05	<.005	0.775	0.685	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-13	19.5	11/12/2002	<.005	0.0981	<.05	0.0058	<.005	1.26	<.005	0.0221	<.005	0.062	<.005	<.005	<.005	<.005	<.005
BSB-13	25	11/12/2002	<.005	0.83	<.05	<.005	<.005	1.27	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-13	27	11/12/2002	<.005	12.3	<.05	0.978	<.005	8.18	<.005	<.005	1.17	11.1	<.005	<.005	<.005	<.005	<.005
BSB-13	29.5	11/12/2002	<.005	19.4	<.05	2.11	<.005	11.8	<.005	1.88	2.34	3.78	<.005	<.005	<.005	<.005	<.005
BSB-13	30	11/12/2002	<.005	18.5	<.05	1.63	<.005	11.9	<.005	1.6	1.74	2.86	<.005	<.005	<.005	<.005	<.005
BSB-13	32	11/12/2002	<.005	3.08	<.05	0.671	<.005	1.38	<.005	0.307	8.01	1.2	0.255	<.005	<.005	<.005	<.005
BSB-13	34.5	11/12/2002	<.005	2.12	<.05	1.3	<.005	3.65	<.005	0.273	1.47	2.48	0.251	0.26	<.005	<.005	<.005
BSB-13	39.5	11/12/2002	<.005	1.18	<.05	0.253	<.005	<.05	<.005	<.005	0.319	<.005	<.005	<.005	<.005	<.005	<.005
BSB-13	4.5	11/12/2002	<.005	1.11	<.05	0.816	<.005	<.05	<.005	1.14	0.94	3.06	<.005	<.005	<.005	<.005	3.94
BSB-13	9.5	11/12/2002	<.005	0.055	<.05	<.005	0.557	0.66	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.117
BSB-14	14.5	11/12/2002	<.005	<.005	<.05	<.005	0.425	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.27
BSB-14	19.5	11/12/2002	<.005	0.0042	<.05	<.005	<.005	<.05	<.005	0.007	<.005	<.005	<.005	<.005	<.005	<.005	0.005
BSB-14	27	11/12/2002	<.005	0.0237	<.05	<.005	<.005	0.034	<.005	<.005	<.005	0.0235	<.005	<.005	<.005	0.006	0.0156
BSB-14	28.5	11/12/2002	<.005	0.04	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.045
BSB-14	29	11/12/2002	<.005	0.0158	<.05	<.005	<.005	0.0847	<.005	<.005	<.005	0.0198	<.005	<.005	<.005	<.005	0.0329
BSB-14	33	11/12/2002	<.005	0.065	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0297
BSB-14	39.5	11/12/2002	<.005	0.305	<.05	<.005	<.005	<.05	<.005	0.107	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-14	42	11/12/2002	<.005	0.0102	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0162
BSB-14	9.5	11/12/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.13
BSB-16	10	11/13/2002	<.005	0.112	<.05	0.0058	<.005	3.77	<.005	<.005	<.005	0.0166	<.005	<.005	0.04	<.005	<.005
BSB-16	14.5	11/13/2002	<.005	<.005	<.05	<.005	<.005	0.449	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-16	19.5	11/13/2002	<.005	0.0076	<.05	<.005	<.005	0.0732	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-16	22	11/13/2002	<.005	0.0112	<.05	<.005	<.005	<.05	<.005	0.0089	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-16	24.5	11/13/2002	<.005	46.9	<.05	1.1	<.005	<.05	<.005	<.005	1.4	2.09	<.005	<.005	<.005	<.005	<.005
BSB-16	29.5	11/13/2002	<.005	23.5	<.05	0.703	0.892	3.96	<.005	<.005	0.965	1.48	<.005	<.005	<.005	<.005	14.3
BSB-16	34.5	11/13/2002	<.005	0.061	<.05	<.005	0.0227	<.05	<.005	0.0088	<.005	0.0171	<.005	<.005	<.005	<.005	0.137
BSB-16	39.5	11/13/2002	<.005	0.012	<.05	<.005	0.0081	<.05	<.005	0.012	<.005	<.005	<.005	<.005	<.005	<.005	0.013
BSB-16	4.5	11/13/2002	<.005	0.0094	<.05	<.005	<.005	0.276	<.005	<.005	<.005	0.0387	<.005	<.005	0.0063	0.0145	<.005
BSB-16	44.5	11/13/2002	<.005	0.004	<.05	0.0061	<.005	<.05	<.005	0.025	<.005	<.005	<.005	<.005	<.005	<.005	0.0143
BSB-16	49.5	11/13/2002	<.005	<.005	<.05	0.0113	<.005	<.05	<.005	0.0272	<.005	<.005	<.005	<.005	<.005	<.005	0.0671
BSB-16	9	11/13/2002	<.005	0.0931	<.05	0.0046	<.005	3.31	<.005	<.005	<.005	0.0142	<.005	<.005	0.033	<.005	<.005
BSB-17	0	11/14/2002	<.005	193	<.05	29.8	<.005	<.05	<.005	<.005	43.2	73.7	23.5	21	<.005	<.005	760
BSB-17	10	11/14/2002	<.005	9.5	<.05	2.52	<.005	<.05	<.005	2.62	0.96	4.73	<.005	<.005	<.005	<.005	2.92
BSB-17	14	11/14/2002	<.005	55	<.05	12.5	<.005	<.05	<.005	<.005	<.005	151	<.005	<.005	<.005	<.005	<.005
BSB-17	15	11/14/2002	<.005	73.6	<.05	14.7	<.005	<.05	<.005	<.005	<.005	150	<.005	<.005	<.005	<.005	<.005
BSB-17	20	11/14/2002	<.005	94.5	<.05	7.2	<.005	<.05	<.005	15.4	<.005	13.4	<.005	<.005	<.005	<.005	21.1
BSB-17	22.5	11/14/2002	<.005	27.6	<.05	2.11	<.005	<.05	<.005	3.55	2.79	4.15	<.005	<.005	<.005	<.005	<.005
BSB-17	25	11/14/2002	<.005	45.1	<.05	3.34	<.005	<.05	<.005	2.91	4.45	6.01	<.005	<.005	<.005	<.005	<.005
BSB-17	27.5	11/14/2002	<.005	41.9	<.05	2.48	<.005	14	<.005	2.77	2.97	4.32	<.005	<.005	<.005	<.005	90.9
BSB-17	30	11/14/2002	<.005	17.7	<.05	1.43	2.06	7.22	<.005	1.17	1.75	2.34	<.005	<.005	<.005	<.005	54.4
BSB-17	35	11/14/2002	<.005	7.06	<.05	<.005	<.005	<.05	<.005	<.005	<.005	6.52	<.005	<.005	<.005	<.005	<.005
BSB-17	40	11/14/2002	<.005	0.364	<.05	<.005	<.005	7	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BSB-17	45	11/14/2002	<.005	0.11	<.05	<.005	<.005	2.45	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
E-11	1.5	3/18/2003	<.002	0.007	<.025	<.005	<.005	<.025	<.002	0.012	0.0053	0.029	<.005	<.005	<.005	<.005	0.014
E-11	10	3/18/2003	<.002	0.0194	<.025	<.005	<.005	0.266	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.002
E-11	15	3/18/2003	<.002	0.027	<.025	<.005	<.005	<.025	<.002	0.01	<.005	0.016	<.005	<.005	<.005	<.005	<.002
E-11	19.5	3/18/2003	<.002	0.005	<.025	<.005	<.005	<.025	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.002
E-11	25	3/18/2003	<.002	1.17	<.025	<.005	<.005	<.025	<.002	0.29	<.005	<.005	<.005	<.005	<.005	<.005	<.002
E-11	30	3/18/2003	<.002	5.94	<.025	0.4	<.005	<.025	<.002	1.01	0.421	0.69	<.005	<.005	<.005	<.005	<.002
E-11	35	3/18/2003	<.002	0.286	<.025	0.0234	<.005	<.025	<.002	0.089	0.0194	0.0383	<.005	<.005	<.005	<.005	<.002
E-11	40	3/18/2003	<.002	0.168	<.025	0.0054	<.005	<.025	<.002	0.066	<.005	0.011	<.005	<.005	<.005	<.005	<.002
E-11	5	3/18/2003	<.002	<.001	<.025	<.005	<.005	<.025	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.002
E-12	1.5	3/18/2003	<.002	<.001	<.025	<.005	<.005	<.025	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0307
E-12	10	3/18/2003	<.002	<.001	<.025	<.005	<.005	<.025	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.002
E-12	15	3/18/2003	<.002	24.5	<.025	2.7	<.005	<.025	<.002	3.89	5.32	6.07	<.005	<.005	<.005	<.005	<.002
E-12	16	3/18/2003	<.002	23	<.025	2.44	<.005	<.025	<.002	5.5	3.86	5.73	<.005	<.005	<.005	<.005	<.002
E-12	20	3/18/2003	<.002	1.44	<.025	0.106	<.005	<.025	<.002	0.516	0.24	0.261	<.005	<.005	<.005	<.005	<.002
E-12	25	3/18/2003	<.002	7.575	<.025	0.257	<.005	<.025	<.002	0.762	0.29	0.525	<.005	<.005	<.005	<.005	<.002
E-12	25.5	3/18/2003	<.002	1.67	<.025	<.005	<.005	<.025	<.002	0.079	########	<.005	<.005	<.005	<.005	<.005	<.002
E-12	5	3/18/2003	<.002	<.001	<.025	<.005	<.005	<.025	<.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.112
MW-01	10	1/1/1990		nd			nd	nd									nd
MW-01	15	1/1/1990		nd			nd	nd									0.049
MW-01	20	1/1/1990		nd			nd	nd									nd

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Acetate	Vinyl Chloride	Xylenes(Total)
BSB-11	34.5	11/11/2002	5.41	<.005	<.005	<.005	<.005	<.005	4.56	1.37	0.143	<.01	4.41
BSB-11	39.5	11/11/2002	0.263	<.005	<.005	<.005	<.005	<.005	0.527	0.138	<.05	<.01	0.616
BSB-11	42	11/11/2002	1.69	<.005	<.005	2.85	<.005	1.48	21	6.89	0.966	<.01	12.7
BSB-11	44	11/11/2002	1.54	<.005	<.005	0.988	<.005	0.065	0.636	0.461	<.05	<.01	0.649
BSB-11	9.5	11/11/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-12	10	11/11/2002	0.391	<.005	<.005	0.292	<.005	<.005	0.228	<.005	<.05	<.01	0.19
BSB-12	14.5	11/11/2002	126	<.005	<.005	207	<.005	20.7	156	28.4	<.05	<.01	129
BSB-12	19.5	11/11/2002	0.46	<.005	<.005	0.458	<.005	<.005	7.05	1.02	<.05	<.01	2.4
BSB-12	24.5	11/11/2002	10.2	<.005	<.005	8.69	<.005	<.005	65.2	9.46	<.05	<.01	21.3
BSB-12	28.5	11/11/2002	1.14	<.005	<.005	1.15	<.005	<.005	0.403	<.005	<.05	<.01	0.476
BSB-12	34.5	11/11/2002	9.32	<.005	<.005	1.57	<.005	<.005	17.7	2.37	<.05	<.01	9.24
BSB-12	39.5	11/11/2002	3.2	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-12	44.5	11/11/2002	0.0029	<.005	<.005	<.005	<.005	0.017	0.0142	0.0082	<.05	<.01	0.0035
BSB-12	9	11/11/2002	0.494	<.005	<.005	0.259	<.005	<.005	0.281	<.005	<.05	<.01	0.271
BSB-13	14.5	11/12/2002	2.48	<.005	<.005	0.247	<.005	<.005	0.205	<.005	<.05	<.01	0.307
BSB-13	19.5	11/12/2002	1.12	<.005	<.005	0.213	<.005	<.005	0.125	0.0261	<.05	<.01	0.443
BSB-13	25	11/12/2002	2.09	<.005	<.005	<.005	<.005	<.005	2.72	0.693	<.05	<.01	3.7
BSB-13	27	11/12/2002	64.8	<.005	<.005	<.005	<.005	<.005	17	5.03	<.05	<.01	48.8
BSB-13	29.5	11/12/2002	111	<.005	<.005	<.005	<.005	<.005	32.1	8.77	<.05	<.01	90.6
BSB-13	30	11/12/2002	98.6	<.005	<.005	<.005	<.005	<.005	25.5	7.26	<.05	<.01	74.3
BSB-13	32	11/12/2002	12.9	<.005	<.005	<.005	<.005	<.005	10.6	2.92	<.05	<.01	7.73
BSB-13	34.5	11/12/2002	0.256	<.005	<.005	<.005	<.005	<.005	18.7	6.07	<.05	<.01	3.06
BSB-13	39.5	11/12/2002	3.48	<.005	<.005	<.005	<.005	<.005	4.32	1.31	<.05	<.01	2.28
BSB-13	4.5	11/12/2002	15	<.005	<.005	1.6	<.005	<.005	21.2	7.45	<.05	<.01	6.51
BSB-13	9.5	11/12/2002	1.17	<.005	<.005	0.244	<.005	<.005	0.259	<.005	<.05	<.01	0.258
BSB-14	14.5	11/12/2002	<.005	<.005	<.005	2.85	<.005	0.255	<.005	<.005	<.05	<.01	0.185
BSB-14	19.5	11/12/2002	0.0142	<.005	<.005	0.506	<.005	0.0127	0.068	0.015	<.05	<.01	0.065
BSB-14	27	11/12/2002	0.0817	<.005	<.005	0.4	<.005	0.0893	0.039	0.01	<.05	<.01	0.119
BSB-14	28.5	11/12/2002	0.234	<.005	<.005	0.577	<.005	0.04	<.005	<.005	<.05	<.01	0.125
BSB-14	29	11/12/2002	0.196	<.005	<.005	0.304	<.005	0.0158	0.0272	0.0075	<.05	<.01	0.0845
BSB-14	33	11/12/2002	0.0071	<.005	<.005	0.628	<.005	0.01	0.008	<.005	<.05	<.01	0.115
BSB-14	39.5	11/12/2002	0.943	<.005	<.005	<.005	<.005	<.005	0.332	0.272	<.05	<.01	0.435
BSB-14	42	11/12/2002	0.002	<.005	<.005	0.0192	<.005	<.005	<.005	<.005	<.05	<.01	<.005
BSB-14	9.5	11/12/2002	<.005	<.005	<.005	0.798	<.005	0.115	<.005	<.005	<.05	<.01	<.005
BSB-16	10	11/13/2002	0.0921	<.005	<.005	<.005	<.005	<.005	0.285	0.0733	<.05	<.01	0.251
BSB-16	14.5	11/13/2002	0.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.004
BSB-16	19.5	11/13/2002	0.00591	<.005	<.005	<.005	<.005	<.005	0.00742	<.005	<.05	<.01	0.0153
BSB-16	22	11/13/2002	0.0083	<.005	<.005	<.005	<.005	<.005	0.0122	<.005	<.05	<.01	0.0302
BSB-16	24.5	11/13/2002	54.7	<.005	<.005	<.005	<.005	<.005	21.1	6.2	<.05	<.01	101
BSB-16	29.5	11/13/2002	46.7	<.005	<.005	4.95	<.005	9.56	14.4	3.97	<.05	<.01	45.3
BSB-16	34.5	11/13/2002	0.525	<.005	<.005	0.0183	<.005	0.345	0.0673	0.0127	<.05	<.01	0.268
BSB-16	39.5	11/13/2002	0.0534	<.005	<.005	0.0106	<.005	0.0647	0.0052	<.005	<.05	<.01	0.0246
BSB-16	4.5	11/13/2002	0.0062	<.005	<.005	<.005	<.005	<.005	0.0964	0.0242	<.05	<.01	0.0379
BSB-16	44.5	11/13/2002	0.0125	<.005	<.005	<.005	<.005	0.35	0.0138	<.005	<.05	<.01	0.01
BSB-16	49.5	11/13/2002	0.00489	<.005	<.005	<.005	<.005	0.536	0.208	0.0452	<.05	<.01	0.113
BSB-16	9	11/13/2002	0.0814	<.005	<.005	<.005	<.005	<.005	0.24	0.0614	<.05	<.01	0.222
BSB-17	0	11/14/2002	943	<.005	631	<.005	<.005	31.7	<.005	199	<.05	<.01	1450
BSB-17	10	11/14/2002	67	<.005	<.005	<.005	<.005	<.005	<.005	14	<.05	<.01	64.1
BSB-17	14	11/14/2002	450	<.005	<.005	11.1	<.005	<.005	207	60.7	<.05	<.01	343
BSB-17	15	11/14/2002	320	<.005	<.005	12.8	<.005	<.005	234	71	<.05	<.01	388
BSB-17	20	11/14/2002	546	<.005	<.005	28.5	<.005	20.7	161	39.1	<.05	<.01	451
BSB-17	22.5	11/14/2002	120	<.005	<.005	3.25	<.005	<.005	47.2	12.6	<.05	<.01	118
BSB-17	25	11/14/2002	131	<.005	<.005	<.005	<.005	<.005	70	17	<.05	<.01	195
BSB-17	27.5	11/14/2002	195	<.005	<.005	36.4	<.005	10.3	54.1	14.3	<.05	<.01	172
BSB-17	30	11/14/2002	112	<.005	<.005	14.9	<.005	5.13	30.6	7.82	<.05	<.01	37.4
BSB-17	35	11/14/2002	37.3	<.005	<.005	<.005	<.005	<.005	10.1	3.11	<.05	<.01	30
BSB-17	40	11/14/2002	8.72	<.005	<.005	<.005	<.005	<.005	0.404	0.221	<.05	<.01	2.43
BSB-17	45	11/14/2002	1.45	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	2.55
E-11	1.5	3/18/2003	0.0125	<.005	<.005	<.005	<.005	0.025	0.088	0.025	<.025	<.002	0.075
E-11	10	3/18/2003	0.0021	<.005	<.005	0.009	<.005	0.0181	0.026	0.0065	<.025	<.002	0.085
E-11	15	3/18/2003	0.02	<.005	<.005	<.005	<.005	<.002	0.041	0.008	<.025	<.002	0.116
E-11	19.5	3/18/2003	0.016	<.005	<.005	<.005	<.005	0.0029	<.005	<.005	<.025	<.002	0.019
E-11	25	3/18/2003	6.94	<.005	<.005	<.005	<.005	<.002	1.35	0.32	<.025	<.002	4.65
E-11	30	3/18/2003	3.31	<.005	<.005	<.005	<.005	<.002	7	1.8	<.025	<.002	25.2
E-11	35	3/18/2003	0.191	<.005	<.005	<.005	<.005	<.002	0.471	0.108	<.025	<.002	0.888
E-11	40	3/18/2003	0.0977	<.005	<.005	<.005	<.005	<.002	0.125	0.024	<.025	0.11	0.188
E-11	5	3/18/2003	0.013	<.005	<.005	<.005	<.005	0.029	0.005	<.005	<.025	<.002	0.022
E-12	1.5	3/18/2003	<.001	<.005	<.005	<.005	<.005	<.002	<.005	<.005	<.025	<.002	<.001
E-12	10	3/18/2003	<.001	<.005	<.005	<.005	<.005	<.002	<.005	<.005	<.025	<.002	<.001
E-12	15	3/18/2003	16.8	<.005	<.005	<.005	<.005	<.002	58.5	18	<.025	<.002	61.9
E-12	16	3/18/2003	11.6	<.005	<.005	<.005	<.005	<.002	55.4	15.1	<.025	<.002	51.2
E-12	20	3/18/2003	0.62	<.005	<.005	<.005	<.005	<.002	0.352	0.84	<.025	<.002	3.84
E-12	25	3/18/2003	6.1	<.005	<.005	<.005	<.005	<.002	5.7	1.35	<.025	<.002	13.3
E-12	25.5	3/18/2003	5.07	<.005	<.005	<.005	<.005	<.002	0.355	0.072	<.025	<.002	2.13
E-12	5	3/18/2003	<.001	<.005	<.005	<.005	<.005	<.002	<.005	<.005	<.025	<.002	<.001
MW-01	10	1/1/1990	0.014			nd		nd					nd
MW-01	15	1/1/1990	nd			0.15		nd					nd
MW-01	20	1/1/1990	nd			nd		nd					nd

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	4-Chlorotoluene	1,2-Dibromo-3-Chloropropan	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,4-Dioxane
MW-01	25	1/1/1990	0.43	nd	nd							nd	nd				
MW-01	30	1/1/1990	15	nd	nd							0.24	nd				
MW-01	35	1/1/1990	0.085	0.016	nd							0.039	nd				
MW-01	40	1/1/1990	15	nd	nd							nd	nd				
MW-02	5	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-02	10	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-02	20	1/7/1994	0.097	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-02	30	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	0.01	0.037	<.005		<.005	
MW-02	40	1/7/1994	1.102	<.005	0.72	<.005	<.03	<.05			<.005	0.03	0.102	<.005		<.005	
MW-03	5	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-03	10	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-03	20	1/7/1994	0.261	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-03	30	1/7/1994	15.1	<.005	3	<.005	<.03	<.05			<.005	<.005	0.332	<.005		<.005	
MW-03	40	1/7/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	0.023	<.005	<.005		<.005	
MW-04	5	1/5/1994	1.64	<.05	1.99	<.05	<.3	<.5			<.05	0.054	<.05	<.05		<.05	
MW-04	10	1/5/1994	2.13	<.05	4.26	<.05	<.3	<.5			<.05	<.05	<.05	<.05		<.05	
MW-04	20	1/5/1994	<10	<1	<10	<1	<6	<10			<1	<1	<1	<1		<1	
MW-05	2	1/5/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-05	5	1/5/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	0.031	<.005	<.005		<.005	
MW-05	10	1/5/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-05	20	1/5/1994	0.974	<.005	0.529	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-06	5	1/11/1994	5.18	<.01	3.11	<.01	<.03	<.05			<.01	0.301	0.02	0.01		<.01	
MW-06	10	1/11/1994	2.03	<.01	0.804	<.01	<.03	<.05			<.01	0.078	<.01	0.018		<.01	
MW-06	20	1/11/1994	<.05	<.01	<.05	<.01	<.03	<.05			<.01	<.01	0.027	<.01		<.01	
MW-07	5	1/6/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	0.012	<.005	<.005		<.005	
MW-07	10	1/6/1994	<.005	<.005	<.05	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-07	20	1/6/1994	0.117	<.005	0.147	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-07	30	1/10/1994	6.05	<.005	29.7	<.005	<.03	<.05			<.005	<.005	<.005	<.005		<.005	
MW-07	40	1/10/1994	<.05	<.005	<.05	<.005	<.03	<.05			<.005	0.027	<.005	<.005		<.005	
MW-08	10	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.04	<.005	<.005	0.02	<.005	
MW-08	15	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0475	0.0056	<.005	0.025	<.005	
MW-08	19	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.175	0.0067	<.005	0.115	<.005	
MW-08	24	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.455	0.195	<.005	0.265	<.005	
MW-08	29	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.991	<.005	<.005	0.748	<.005	
MW-08	3.5	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0275	<.005	<.005	0.008	<.005	
MW-08	30	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	7.35	<.005	4.95	3.6	<.005	
MW-08	32.5	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	29.8	1.85	<.005	12.3	<.005	
MW-08	35	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	3.68	<.005	<.005	1.9	<.005	
MW-08	40	6/6/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	2.09	0.09	<.005	1.36	<.005	
MW-08	42.5	6/6/2002	<.05	0.0625	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.145	0.035	<.005	0.212	<.005	
MW-09	10	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	
MW-09	15	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.005	<.005	<.005	0.0225	<.005	
MW-09	20	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	0.0072	<.005	
MW-09	25	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.015	<.005	<.005	0.06	<.005	
MW-09	29	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.095	0.033	<.005	0.4	<.005	
MW-09	3	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.005	0.0051	<.005	0.0176	<.005	
MW-09	35	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.088	0.085	<.005	0.068	<.005	
MW-09	40	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.026	0.027	<.005	0.019	<.005	
MW-09	45	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0057	0.012	<.005	0.005	<.005	
MW-09	50	6/7/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	0.0218	<.005	<.005	<.005	
MW-10	18.5	11/13/2002	12.4	0.0078	4.55	<.005	<.01	<.01	<.005	<.005	<.005	2.04	0.0928	<.005	1.55	<.005	<.1
MW-10	24.5	11/13/2002	3.28	0.00249	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.394	0.0415	<.005	0.281	<.005	<.1
MW-10	27	11/13/2002	6.52	<.005	4.01	<.005	<.01	<.01	<.005	<.005	<.005	4.31	0.52	<.005	3.02	<.005	<.1
MW-10	32	11/13/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	20.2	4.23	<.005	16.5	<.005	<.1
MW-10	35	11/13/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	17.8	2.56	<.005	12.9	<.005	<.1
MW-10	37	11/13/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	8.75	<.005	<.005	1.26	<.005	<.1
MW-10	40	11/13/2002	50.5	0.0545	22	<.005	<.01	<.01	<.005	<.005	<.005	1.74	<.005	<.005	0.393	<.005	<.1
MW-12	10	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0068	<.005	<.005	0.007	<.005	<.1
MW-12	14.5	11/15/2002	0.0263	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0071	<.005	<.005	0.0066	<.005	<.1
MW-12	19.5	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-12	22	11/15/2002	<.05	<.005	<.05	0.0054	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-12	24.5	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-12	27	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-12	29.5	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-12	32	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0102	<.005	<.005	<.005	<.005	<.1
MW-12	32.5	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0112	<.005	<.005	<.005	<.005	<.1
MW-12	34.5	11/15/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.217	<.005	<.005	<.005	<.005	<.1
MW-12	39.5	11/15/2002	0.964	0.145	1.56	0.116	<.01	<.01	<.005	<.005	<.005	0.453	<.005	<.005	0.0675	<.005	<.1
MW-12	44.5	11/15/2002	2.5	<.005	2.43	<.005	<.01	<.01	<.005	<.005	<.005	0.422	<.005	<.005	<.005	<.005	<.1
MW-12	47	11/15/2002	0.0429	0.0523	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0601	0.2	<.005	0.092	<.005	<.1
MW-12	5	11/15/2002	0.025	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0096	<.005	<.005	0.0134	<.005	<.1
MW-14	65	12/3/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
MW-15	24.5	11/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.005	<.005	<.005	0.0179	<.005	<.1
MW-15	25	11/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0052	<.005	<.005	0.0178	<.005	<.1
MW-15	30	11/19/2002	<.05	0.002	<.05	0.005	<.01	<.01	<.005	<.005	<.005	0.142	0.0061	<.005	0.665	<.005	<.1
MW-15	35	11/19/2002	<.05	0.0056	<.05	0.005	<.01	<.01	<.005	<.005	<.005	0.258	0.0327	<.005	1.05	<.005	<.1
MW-15	45	11/19/2002	<.05	0.0073	<.05	<.005	0.0063	<.01	<.005	<.005	<.005	0.31	0.384	<.005	1.91	<.005	<.1
MW-15	50	11/19/2002	<.05	0.0071	<.05	0.0106	<.01	<.01	<.005	<.005	<.005	0.205	1.25	<.005	1.25	<.005	0.283

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	DIPE	Ethylbenzene	2-Hexanone	Isopropylbenzene	Methylene Chloride	4-Methyl-2-Pentanone	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
MW-01	25	1/1/1990		nd			nd	nd									nd
MW-01	30	1/1/1990		2.2			10	nd									6.3
MW-01	35	1/1/1990		nd			6.8	nd									nd
MW-01	40	1/1/1990		nd			nd	nd									nd
MW-02	5	1/7/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-02	10	1/7/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-02	20	1/7/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-02	30	1/7/1994		<.005	<.03		<.05	<.03							<.005		0.033
MW-02	40	1/7/1994		0.113	<.03		<.05	0.352							<.005		0.194
MW-03	5	1/7/1994		<.005	<.03		<.05	<.03							<.005		0.013
MW-03	10	1/7/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-03	20	1/7/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-03	30	1/7/1994		0.109	<.03		<.05	1.34							<.005		0.452
MW-03	40	1/7/1994		<.005	<.03		<.05	<.03							<.005		0.069
MW-04	5	1/5/1994		0.082	<.3		<.5	0.594							<.05		<.05
MW-04	10	1/5/1994		<.05	<.3		<.5	<.3							<.05		<.05
MW-04	20	1/5/1994		16.6	<6		<10	12							<1		98.9
MW-05	2	1/5/1994		<.005	<.03		<.05	<.03							<.005		0.021
MW-05	5	1/5/1994		<.005	<.03		<.05	<.03							<.005		0.019
MW-05	10	1/5/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-05	20	1/5/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-06	5	1/11/1994		0.032	<.03		<.05	0.9							<.01		0.024
MW-06	10	1/11/1994		<.01	<.03		<.05	1.23							<.01		<.01
MW-06	20	1/11/1994		3.22	<.03		<.05	2.44							<.01		3.51
MW-07	5	1/6/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-07	10	1/6/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-07	20	1/6/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-07	30	1/10/1994		<.005	<.03		<.05	0.069							<.005		<.005
MW-07	40	1/10/1994		<.005	<.03		<.05	<.03							<.005		<.005
MW-08	10	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-08	15	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-08	19	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-08	24	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-08	29	6/6/2002	<.005	2.26	<.05	0.438	<.005	<.05	<.005	1.04	0.968	1.3	<.005	<.005	<.005	<.005	<.005
MW-08	3.5	6/6/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-08	30	6/6/2002	<.005	14.1	<.05	2.75	<.005	<.05	<.005	6.1	4.35	8.7	<.005	<.005	<.005	<.005	<.005
MW-08	32.5	6/6/2002	<.005	27.9	<.05	5.29	<.005	<.05	<.005	11	7.95	18.1	<.005	<.005	<.005	<.005	<.005
MW-08	35	6/6/2002	<.005	3.34	<.05	0.52	<.005	<.05	<.005	0.98	0.8	1.82	<.005	<.005	<.005	<.005	<.005
MW-08	40	6/6/2002	<.005	3.51	<.05	0.566	<.005	<.05	<.005	1.29	0.851	1.87	<.005	<.005	<.005	<.005	0.16
MW-08	42.5	6/6/2002	<.005	0.025	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	10	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	15	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	20	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	25	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	29	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	3	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0248
MW-09	35	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	40	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0056
MW-09	45	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-09	50	6/7/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-10	18.5	11/13/2002	<.005	0.0352	<.05	<.005	<.005	0.135	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-10	24.5	11/13/2002	<.005	0.0215	<.05	<.005	<.005	0.0388	<.005	0.0079	<.005	0.0166	<.005	<.005	<.005	<.005	<.005
MW-10	27	11/13/2002	<.005	2.18	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-10	32	11/13/2002	<.005	93.1	<.05	15.2	<.005	<.05	<.005	33.8	25	38.5	<.005	<.005	<.005	<.005	2.59
MW-10	35	11/13/2002	<.005	20.5	<.05	5.22	<.005	<.05	<.005	4.23	4.45	14.9	<.005	<.005	<.005	<.005	<.005
MW-10	37	11/13/2002	<.005	9.01	<.05	3.06	<.005	<.05	<.005	2.5	2.59	8.19	<.005	<.005	<.005	<.005	<.005
MW-10	40	11/13/2002	<.005	0.321	<.05	<.005	<.005	6.16	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	10	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	14.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	19.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	22	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	24.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	0.0056	<.005	<.005	0.0168	<.005	<.005	<.005	<.005	<.005
MW-12	27	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	29.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	32	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	32.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	34.5	11/15/2002	<.005	0.0085	<.05	<.005	<.005	<.05	<.005	0.0076	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-12	39.5	11/15/2002	<.005	0.238	<.05	<.005	<.005	0.68	<.005	0.202	1.35	3.91	0.287	0.351	<.005	<.005	<.005
MW-12	44.5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	0.747	<.005	<.005	<.005	<.005	<.005
MW-12	47	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0118
MW-12	5	11/15/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0203
MW-14	65	12/3/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-15	24.5	11/19/2002	<.005	0.0022	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-15	25	11/19/2002	<.005	0.0032	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-15	30	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-15	35	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0117
MW-15	45	11/19/2002	<.005	0.023	<.05	<.005	<.005	<.05	<.005	0.0066	<.005	<.005	<.005	<.005	<.005	<.005	0.165
MW-15	50	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0121

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Acetate	Vinyl Chloride	Xylenes(Total)
MW-01	25	1/1/1990	nd			nd		nd					nd
MW-01	30	1/1/1990	0.33			3.5		0.27					7.7
MW-01	35	1/1/1990	nd			nd		0.18					2.4
MW-01	40	1/1/1990	nd			nd		nd					1.8
MW-02	5	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-02	10	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-02	20	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-02	30	1/7/1994	0.015			0.069	<.005	0.024			<.03	<.03	<.005
MW-02	40	1/7/1994	0.168			0.088	<.005	<.005			<.03	<.03	0.494
MW-03	5	1/7/1994	<.005			0.018	<.005	0.018			<.03	<.03	<.005
MW-03	10	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-03	20	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-03	30	1/7/1994	0.48			0.088	<.005	<.005			<.03	<.03	0.47
MW-03	40	1/7/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-04	5	1/5/1994	<.05			<.05	<.05	<.05			<.3	<.3	<.05
MW-04	10	1/5/1994	<.05			0.071	<.05	<.05			<.3	<.3	<.05
MW-04	20	1/5/1994	48.7			54.7	<1	16.5			<6	<6	61
MW-05	2	1/5/1994	0.008			0.005	<.005	<.005			<.03	<.03	0.013
MW-05	5	1/5/1994	0.006			<.005	<.005	0.007			<.03	<.03	0.016
MW-05	10	1/5/1994	0.009			<.005	<.005	<.005			<.03	<.03	<.005
MW-05	20	1/5/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-06	5	1/11/1994	0.424			0.412	<.01	0.011			<.03	<.03	0.277
MW-06	10	1/11/1994	0.036			0.312	<.01	<.01			<.03	<.03	<.01
MW-06	20	1/11/1994	4.3			2.97	<.01	0.154			<.03	<.03	10.24
MW-07	5	1/6/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-07	10	1/6/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-07	20	1/6/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-07	30	1/10/1994	0.034			<.005	<.005	<.005			<.03	<.03	0.007
MW-07	40	1/10/1994	<.005			<.005	<.005	<.005			<.03	<.03	<.005
MW-08	10	6/6/2002	<.005	<.005	<.005	0.0525	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-08	15	6/6/2002	<.005	<.005	<.005	0.045	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-08	19	6/6/2002	<.005	<.005	<.005	0.247	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-08	24	6/6/2002	<.005	<.005	<.005	0.835	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-08	29	6/6/2002	2.31	<.005	<.005	9.55	<.005	<.005	15.5	4.42	<.05	<.01	9.58
MW-08	3.5	6/6/2002	<.005	<.005	<.005	0.0425	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-08	30	6/6/2002	34.1	<.005	<.005	36.4	<.005	<.005	80.5	19.8	<.05	<.01	52
MW-08	32.5	6/6/2002	65.5	<.005	<.005	42.8	<.005	<.005	161	47.5	<.05	<.01	92.6
MW-08	35	6/6/2002	6.92	<.005	<.005	10.2	<.005	0.46	17.3	4.58	<.05	<.01	10.9
MW-08	40	6/6/2002	7.25	<.005	<.005	10.6	<.005	0.26	18.4	4.63	<.05	<.01	11.6
MW-08	42.5	6/6/2002	0.452	<.005	<.005	0.055	<.005	<.005	0.05	0.095	<.05	<.01	0.113
MW-09	10	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	15	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	20	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	25	6/7/2002	<.005	<.005	<.005	0.0076	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	29	6/7/2002	<.005	<.005	<.005	0.035	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	3	6/7/2002	<.005	<.005	<.005	0.0133	<.005	0.0067	<.005	<.005	<.05	<.01	<.005
MW-09	35	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	40	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	45	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-09	50	6/7/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-10	18.5	11/13/2002	0.285	<.005	<.005	1.15	<.005	<.005	0.0638	0.0116	<.05	<.01	0.22
MW-10	24.5	11/13/2002	0.0986	<.005	<.005	0.336	<.005	<.005	0.0355	0.00728	<.05	<.01	0.101
MW-10	27	11/13/2002	4.24	<.005	<.005	5.45	<.005	<.005	7.83	1.91	<.05	<.01	10
MW-10	32	11/13/2002	179	<.005	<.005	198	<.005	3.56	393	115	<.05	<.01	315
MW-10	35	11/13/2002	69	<.005	<.005	1.02	<.005	<.005	106	35.9	<.05	<.01	63.7
MW-10	37	11/13/2002	54.8	<.005	<.005	<.005	<.005	<.005	51.6	18.1	<.05	<.01	31
MW-10	40	11/13/2002	4.77	<.005	<.005	<.005	<.005	<.005	0.304	0.105	<.05	<.01	1.29
MW-12	10	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	14.5	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	19.5	11/15/2002	0.002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	22	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	24.5	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.0254	0.0061	<.05	<.01	0.0262
MW-12	27	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	29.5	11/15/2002	0.0029	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	0.0027
MW-12	32	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	32.5	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-12	34.5	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0102	<.05	0.146	0.01
MW-12	39.5	11/15/2002	0.097	<.005	<.005	<.005	<.005	<.005	17.7	8.75	<.05	<.01	0.135
MW-12	44.5	11/15/2002	<.005	<.005	<.005	<.005	<.005	<.005	4.05	1.87	<.05	<.01	<.005
MW-12	47	11/15/2002	<.005	<.005	<.005	<.005	<.005	0.0789	0.0212	0.0088	<.05	<.01	<.005
MW-12	5	11/15/2002	<.005	<.005	<.005	0.0068	<.005	0.0058	<.005	<.005	<.05	<.01	<.005
MW-14	65	12/3/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-15	24.5	11/19/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.006	<.005	<.05	0.0084	0.0048
MW-15	25	11/19/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.0088	<.005	<.05	0.0078	0.0053
MW-15	30	11/19/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	0.0296	<.005
MW-15	35	11/19/2002	0.0025	<.005	<.005	<.005	<.005	0.0193	<.005	<.005	<.05	0.0174	<.005
MW-15	45	11/19/2002	<.005	<.005	<.005	<.005	<.005	0.25	0.0163	<.005	<.05	<.01	0.0026
MW-15	50	11/19/2002	0.0024	<.005	<.005	<.005	<.005	0.0236	0.0343	<.005	<.05	<.01	0.003

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	2-Chloroethyl Vinyl Ether	4-Chlorotoluene	1,2-Dibromo-3-Chloropropan	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,4-Dioxane
MW-15	55	11/19/2002	<.05	0.0085	<.05	0.0059	0.017	<.01	<.005	<.005	<.005	0.27	0.113	<.005	1.88	<.005	0.627
MW-16	10	11/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0279	0.0124	<.005	0.175	<.005	0.189
MW-16	25	11/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.036	0.0293	<.005	0.233	<.005	<.1
MW-16	27.5	11/19/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.203	0.0735	<.005	0.84	<.005	<.1
MW-16	39.5	11/19/2002	<.05	0.0096	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.625	0.38	<.005	0.172	<.005	3.48
MW-16	40	11/19/2002	<.05	0.0115	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.669	0.494	<.005	0.194	<.005	4.34
MW-17	24.5	11/20/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0396	0.01	<.005	0.111	<.005	<.1
MW-17	26.8	11/20/2002	<.05	0.0042	<.05	<.005	<.01	<.01	<.005	<.005	<.005	1.01	0.185	<.005	2.68	<.005	0.252
MW-17	29.5	11/20/2002	<.05	0.0065	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.251	0.0101	<.005	0.054	<.005	0.84
MW-17	30	11/20/2002	0.0424	0.0024	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0959	0.0035	<.005	0.0235	<.005	1.02
MW-17	34.5	11/20/2002	<.05	0.0109	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.221	0.0124	<.005	0.0082	<.005	13.8
MW-17	39.5	11/20/2002	<.05	0.0032	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.138	0.161	<.005	0.0496	<.005	3.71
MW-17	40	11/20/2002	<.05	0.0034	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.127	0.15	<.005	0.0497	<.005	3.56
MW-17	9.5	11/20/2002	<.05	0.056	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.0738	0.0376	<.005	0.455	<.005	<.1
MW-19	14.5	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	17.1	55.2	<.005	<.005	<.005	13
MW-19	19.5	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	3.5	<.005	<.005	<.005	<.1
MW-19	24.5	11/21/2002	2.7	<.005	5.33	<.005	<.01	<.01	<.005	<.005	<.005	0.058	<.005	<.005	<.005	<.005	2.7
MW-19	28	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	48.8	<.005	<.005	<.005	<.1
MW-19	29.5	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	47.6	<.005	<.005	<.005	<.1
MW-19	34	11/21/2002	15.2	0.125	7.51	<.005	<.01	<.01	<.005	<.005	<.005	0.685	2	<.005	2.22	<.005	<.1
MW-19	38	11/21/2002	17	0.202	7.83	<.005	<.01	<.01	<.005	<.005	<.005	0.994	2.06	<.005	1.81	<.005	1.6
MW-19	39	11/21/2002	17.6	0.25	8.49	<.005	<.01	<.01	<.005	<.005	<.005	1.06	2.31	<.005	1.74	<.005	1.83
MW-19	4.5	11/21/2002	38.4	<.005	10.5	<.005	<.01	<.01	<.005	<.005	<.005	1.66	1	<.005	<.005	<.005	42
MW-19	44	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.156	0.206	<.005	<.005	<.005	<.1
MW-19	49.5	11/21/2002	1.02	0.0328	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.161	0.237	<.005	<.005	<.005	<.1
MW-19	5	11/21/2002	26.4	<.005	10.8	<.005	<.01	<.01	<.005	<.005	<.005	1.7	1	<.005	<.005	<.005	36
MW-19	54.5	11/21/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	0.05	0.258	<.005	<.005	<.005	<.1
RR-01	0	10/1/1992	2.8		nd								nd	nd			
RR-02	1.5	10/1/1992	nd		nd								nd	nd			
RR-03	0	10/1/1992	nd		nd								8.3	3.9			
RR-04	1.5	10/1/1992	nd		15								nd	nd			
RR-05	0	10/1/1992	nd		nd								nd	nd			
RR-06	1.5	10/1/1992	3100		38								nd	nd			
RR-07	0	10/1/1992	nd		nd								nd	nd			
SS-01	0	9/25/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
SS-01	0	4/1/1990	nd	nd	nd							nd	nd				
SS-02	0	9/25/2002	<.05	<.005	<.05	<.005	<.01	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.1
SS-02	0	4/1/1990	nd	nd	nd							nd	nd				

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

Location	Depth	Sample Date	DIPE	Ethylbenzene	2-Hexanone	Isopropylbenzene	Methylene Chloride	4-Methyl-2-Pentanone	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
MW-15	55	11/19/2002	<.005	0.0065	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-16	10	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0086
MW-16	25	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-16	27.5	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-16	39.5	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.053
MW-16	40	11/19/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0648
MW-17	24.5	11/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-17	26.8	11/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.0132	<.005	<.005	<.005	<.005	<.005	<.005	0.014
MW-17	29.5	11/20/2002	<.005	0.0213	<.05	<.005	<.005	<.05	<.005	0.0092	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-17	30	11/20/2002	<.005	0.0052	<.05	0.76	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-17	34.5	11/20/2002	<.005	0.105	<.05	0.0095	<.005	<.05	<.005	0.0994	0.0258	0.0155	<.005	<.005	<.005	<.005	<.005
MW-17	39.5	11/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.0054	<.005	<.005	<.005	<.005	<.005	<.005	0.0224
MW-17	40	11/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0212
MW-17	9.5	11/20/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.005
MW-19	14.5	11/21/2002	<.005	101	<.05	<.005	15.4	<.05	<.005	17	16.5	40.1	<.005	<.005	<.005	<.005	210
MW-19	19.5	11/21/2002	<.005	17.1	<.05	<.005	<.005	<.05	<.005	4.8	4.1	8.9	<.005	<.005	<.005	<.005	28.2
MW-19	24.5	11/21/2002	<.005	1.05	<.05	0.262	<.005	<.05	<.005	1.15	0.85	0.722	<.005	<.005	<.005	<.005	0.482
MW-19	28	11/21/2002	<.005	58	<.05	<.005	<.005	<.05	<.005	28	19.6	19.6	<.005	<.005	<.005	<.005	98.4
MW-19	29.5	11/21/2002	<.005	54	<.05	<.005	<.005	<.05	<.005	20	18.4	18.4	<.005	<.005	<.005	<.005	85.8
MW-19	34	11/21/2002	<.005	1.14	<.05	0.11	<.005	<.05	<.005	0.483	0.292	0.305	<.005	<.005	<.005	<.005	0.053
MW-19	38	11/21/2002	<.005	0.575	<.05	<.005	<.005	<.05	<.005	0.213	0.065	0.0875	<.005	<.005	<.005	<.005	<.005
MW-19	39	11/21/2002	<.005	1.05	<.05	<.005	<.005	<.05	<.005	0.431	0.231	0.256	<.005	<.005	<.005	<.005	<.005
MW-19	4.5	11/21/2002	<.005	5.05	<.05	<.005	<.005	<.05	<.005	21.5	9.65	2.14	<.005	<.005	<.005	<.005	9.31
MW-19	44	11/21/2002	<.005	0.137	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-19	49.5	11/21/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-19	5	11/21/2002	<.005	4.55	<.05	<.005	<.005	<.05	<.005	17.8	8.38	2.01	<.005	<.005	<.005	<.005	7.74
MW-19	54.5	11/21/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
RR-01	0	10/1/1992		nd				nd									0.17
RR-02	1.5	10/1/1992		16				nd									32
RR-03	0	10/1/1992		nd				nd									7.6
RR-04	1.5	10/1/1992		1.1				4.1									0.84
RR-05	0	10/1/1992		nd				nd									2300
RR-06	1.5	10/1/1992		5.2				7.2									1200
RR-07	0	10/1/1992		3.6				nd									37
SS-01	0	9/25/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
SS-01	0	4/1/1990		210			nd	nd									32
SS-02	0	9/25/2002	<.005	<.005	<.05	<.005	<.005	<.05	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
SS-02	0	4/1/1990		94			nd	nd									33

All values reported in units of mg/kg.

Table 3-1
VOCs in Soil
Former Angeles Chemical Site

DRAFT

Location	Depth	Sample Date	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Acetate	Vinyl Chloride	Xylenes(Total)
MW-15	55	11/19/2002	<.005	<.005	<.005	<.005	<.005	<.005	0.0546	0.0084	<.05	0.0099	0.005
MW-16	10	11/19/2002	<.005	<.005	<.005	0.0087	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-16	25	11/19/2002	<.005	<.005	<.005	0.092	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-16	27.5	11/19/2002	0.0044	<.005	<.005	0.0207	<.005	<.005	<.005	<.005	<.05	0.276	0.01
MW-16	39.5	11/19/2002	<.005	<.005	<.005	<.005	<.005	0.0422	<.005	<.005	<.05	0.0819	<.005
MW-16	40	11/19/2002	<.005	<.005	<.005	<.005	<.005	0.0496	<.005	<.005	<.05	0.105	<.005
MW-17	24.5	11/20/2002	<.005	<.005	<.005	0.0246	<.005	<.005	0.0066	<.005	<.05	<.01	<.005
MW-17	26.8	11/20/2002	0.0098	<.005	<.005	0.84	<.005	<.005	0.0897	0.0129	<.05	0.069	0.0606
MW-17	29.5	11/20/2002	0.0434	<.005	<.005	0.0161	<.005	<.005	0.0449	0.0099	<.05	0.0792	0.0272
MW-17	30	11/20/2002	0.0125	<.005	<.005	0.0073	<.005	<.005	0.0123	<.005	<.05	0.018	0.0083
MW-17	34.5	11/20/2002	0.56	<.005	<.005	0.0114	<.005	<.005	0.9	0.0691	<.05	0.0139	0.545
MW-17	39.5	11/20/2002	<.005	<.005	<.005	<.005	<.005	0.0068	0.011	<.005	<.05	0.0088	<.005
MW-17	40	11/20/2002	<.005	<.005	<.005	<.005	<.005	0.0071	0.0195	<.005	<.05	0.0095	<.005
MW-17	9.5	11/20/2002	0.271	<.005	<.005	0.0163	<.005	0.005	0.0058	<.005	<.05	0.0098	<.005
MW-19	14.5	11/21/2002	239	<.005	<.005	4150	<.005	<.005	391	123	<.05	<.01	323
MW-19	19.5	11/21/2002	28.5	<.005	<.005	209	<.005	6.1	102	28.3	<.05	<.01	41.1
MW-19	24.5	11/21/2002	2.6	<.005	<.005	2.05	<.005	0.425	11.3	3.38	<.05	<.01	3.36
MW-19	28	11/21/2002	122	<.005	<.005	846	<.005	<.005	316	72.6	<.05	<.01	149
MW-19	29.5	11/21/2002	122	<.005	<.005	748	<.005	<.005	296	65	<.05	<.01	128
MW-19	34	11/21/2002	3.62	<.005	<.005	0.57	<.005	0.05	6.35	1.35	<.05	<.01	2.45
MW-19	38	11/21/2002	3.68	<.005	<.005	0.35	<.005	<.005	1.45	0.28	<.05	<.01	1.27
MW-19	39	11/21/2002	5.31	<.005	<.005	0.3	<.005	<.005	4.17	0.933	<.05	<.01	2.33
MW-19	4.5	11/21/2002	12.2	<.005	<.005	45.7	<.005	2.35	57.3	9.07	<.05	<.01	38.3
MW-19	44	11/21/2002	0.67	<.005	<.005	<.005	<.005	<.005	0.231	<.005	<.05	<.01	0.251
MW-19	49.5	11/21/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
MW-19	5	11/21/2002	9.95	<.005	<.005	38.6	<.005	2.18	50.5	8.13	<.05	<.01	33.6
MW-19	54.5	11/21/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
RR-01	0	10/1/1992	0.25			nd		nd					0.67
RR-02	1.5	10/1/1992	210			17		2.2					115
RR-03	0	10/1/1992	9.3			19000		4.2					3.4
RR-04	1.5	10/1/1992	nd			nd		nd					9.1
RR-05	0	10/1/1992	17			16		nd					6.4
RR-06	1.5	10/1/1992	14			160		nd					28.5
RR-07	0	10/1/1992	4.3			73		nd					29
SS-01	0	9/25/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
SS-01	0	4/1/1990	220			6.4		9.9					540
SS-02	0	9/25/2002	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.05	<.01	<.005
SS-02	0	4/1/1990	120			nd		5.1					264

All values reported in units of mg/kg.

Table 3-2
SVOCs in Soil
Former Angeles Chemcial Facility

Location	Depth (feet)	Sample Date	2-Methylnaphthalene	4-Methylphenol (p-cresol)	Bis(2-Ethylhexyl)phthalate	Naphthalene	Phenol
BSB-01	1.5	6/5/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-01	10.5	6/5/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-01	6.5	6/5/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-02	1.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-02	11.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-02	6.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-03	6.5	8/15/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-03	11.5	8/15/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-04	6.5	8/15/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-04	12	8/15/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-05	7	8/16/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-05	12	8/16/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-06	5	8/16/02	54	<10	8.78	129	<10
BSB-06	9	8/16/02	1.26	<5	<5	8.15	<5
BSB-06	10	8/16/02	0.74	<0.5	<0.5	2.91	<0.5
BSB-07	15	8/19/02	<0.5	<0.5	18.6	15	<0.5
BSB-07	2.5	8/19/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-07	7.5	8/19/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-08	10	8/19/02	<0.5	<0.5	0.42	<0.5	<0.5
BSB-08	13	8/19/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-08	5	8/19/02	<0.5	1.02	<0.5	<0.5	0.55
BSB-09	15	8/20/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-09	5	8/20/02	8.2	<0.5	5.5	25.2	<0.5
BSB-09	8	8/20/02	17	<0.5	8.8	31.5	<0.5
BSB-10	12.5	8/20/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-10	2	8/20/02	<0.5	<0.5	<0.5	<0.5	<0.5
BSB-10	7.5	8/20/02	<0.5	<0.5	<0.5	<0.5	<0.5
MW-08	1.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
MW-08	11.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
MW-08	6.5	6/6/02	<0.5	<0.5	<0.5	<0.5	<0.5
MW-09	3	6/7/02	<0.5	<0.5	<0.5	<0.5	<0.5
MW-09	5.5	6/7/02	<0.5	<0.5	<0.5	<0.5	<0.5
MK-PI-SB-0	25	3/25/86				<.2	
MK-PI-SB-0	25	3/20/86				<.2	
MK-PI-SB-0	30	3/20/86				.2	
MK-PI-SB-0	37	3/20/86				<.2	
MK-PI-SB-0	35	3/20/86				<.2	
MK-PI-SB-0	36	3/20/86				<.2	

All values reported in units of mg/kg.

Table 3-3
Petroleum Hydrocarbons in Soil
Former Angeles Chemcial Site

DRAFT

Location	Depth (feet)	Sample Date	Gasoline Range (C4-C12)	Gasoline Range (C8-C12)	Diesel Range (C14-C22)	Heavy Oil Range (C24-C40)	TRPH
BSB-01	1.5	6/5/02			<10	<10	
BSB-01	10.5	6/5/02			<10	<10	
BSB-01	10	6/5/02	<1				
BSB-01	17.5	6/5/02	<1		<10	<10	
BSB-01	20	6/5/02	<1		<10	<10	
BSB-01	27.5	6/5/02	<1		<10	<10	
BSB-01	28.5	6/5/02			<10	<10	
BSB-01	28	6/5/02	1.2				
BSB-01	35	6/5/02	<1		<10	<10	
BSB-01	40	6/5/02	<1		<10	<10	
BSB-01	5	6/5/02	1.6				
BSB-01	50	6/5/02	<1		<10	<10	
BSB-01	6.5	6/5/02			<10	<10	
BSB-02	14	6/6/02	<1				
BSB-02	18	6/6/02	<1		<10	<10	
BSB-02	21	6/6/02	<1		<10	<10	
BSB-02	26.5	6/6/02	<1				
BSB-02	27.5	6/6/02			<10	<10	
BSB-02	4	6/6/02	<1				
BSB-02	9	6/6/02	<1				
BSB-03	6.5	8/15/02	<1		<10	<10	
BSB-03	11.5	8/15/02	<1		<10	<10	
BSB-03	18	8/15/02	0.9		<10	<10	
BSB-03	19	8/15/02	<1		<10	<10	
BSB-03	27	8/15/02	54.4		<10	<10	
BSB-03	28	8/15/02	1410		42	<10	
BSB-03	35	8/15/02	<1		<10	<10	
BSB-03	40	8/15/02	<1		<10	<10	
BSB-04	6.5	8/15/02	<1		<10	<10	
BSB-04	12	8/15/02	<1		<10	<10	
BSB-04	17	8/15/02	9.6		<10	<10	
BSB-04	25	8/15/02	9.5		<10	<10	
BSB-04	26.5	8/15/02	8.1		<10	<10	
BSB-04	34	8/15/02	67.2		<10	<10	
BSB-04	40	8/15/02	80		10	<10	
BSB-05	7	8/16/02	<1		<10	<10	
BSB-05	12	8/16/02	<1		<10	<10	
BSB-05	20	8/16/02	<1		<10	<10	
BSB-05	23	8/16/02	1.1		<10	<10	
BSB-05	28	8/16/02	6		<10	<10	
BSB-05	34	8/16/02	8		<10	<10	
BSB-05	37.5	8/16/02	58		<10	<10	
BSB-05	40	8/16/02	83.6		<10	<10	
BSB-05	30	8/16/02	2080		172	<10	
BSB-05	34	8/16/02	2490		449	<10	
BSB-06	5	8/16/02	6890		426	<10	
BSB-06	9	8/16/02	594		<10	<10	
BSB-06	10	8/16/02	137		<10	<10	
BSB-06	15	8/16/02	1760		48	<10	
BSB-06	15	8/16/02	555				
BSB-06	15	8/16/02	900				

All values reported in units of mg/kg.

Table 3-3
Petroleum Hydrocarbons in Soil
Former Angeles Chemcial Site

Location	Depth (feet)	Sample Date	Gasoline Range (C4-C12)	Gasoline Range (C8-C12)	Diesel Range (C14-C22)	Heavy Oil Range (C24-C40)	TRPH
BSB-06	19	8/16/02	1970		119	<10	
BSB-06	25	8/16/02	780		86	<10	
BSB-06	40	8/16/02	55.4		10	<10	
BSB-07	15	8/19/02	10400		190		
BSB-07	17	8/19/02	301		53		
BSB-07	2.5	8/19/02	1.9		<10		
BSB-07	22.5	8/19/02	542		30		
BSB-07	27.5	8/19/02	290		<10		
BSB-07	30	8/19/02	1430		244		
BSB-07	33	8/19/02	9070		309		
BSB-07	40	8/19/02	31		<10		
BSB-07	41.5	8/19/02	<1		<10		
BSB-07	7.5	8/19/02	10.6		<10		
BSB-08	10	8/19/02	204		<10		
BSB-08	13	8/19/02	190		<10		
BSB-08	18	8/19/02	344		23		
BSB-08	27.5	8/19/02	279		11		
BSB-08	31	8/19/02	782		19		
BSB-08	35	8/19/02	143		16		
BSB-08	40	8/19/02	29		<10		
BSB-08	45	8/19/02	57		<10		
BSB-08	5	8/19/02	32		<10		
BSB-09	15	8/20/02	191		<10	<10	
BSB-09	17	8/20/02	26		<10	<10	
BSB-09	22.5	8/20/02	54		<10	<10	
BSB-09	24	8/20/02	223		45	<10	
BSB-09	27.5	8/20/02	6260		340	<10	
BSB-09	32.5	8/20/02	1940		<10	<10	
BSB-09	35	8/20/02	105		<10	<10	
BSB-09	40	8/20/02	43		<10	<10	
BSB-09	5	8/20/02	2490		1150	<10	
BSB-09	8	8/20/02	2980		125	<10	
BSB-10	12.5	8/20/02	<1		<10		
BSB-10	16	8/20/02	<1		<10		
BSB-10	2	8/20/02	<1		<10		
BSB-10	22.5	8/20/02	<1		<10		
BSB-10	27.5	8/20/02	35		<10		
BSB-10	30	8/20/02	20		<10		
BSB-10	35	8/20/02	<1		<10		
BSB-10	40	8/20/02	<1		<10		
BSB-10	7.5	8/20/02	37		<10		
BSB-11	14.5	11/11/02	<1		<10		
BSB-11	19.5	11/11/02	<1		<10		
BSB-11	24.5	11/11/02	<1		<10		
BSB-11	29.5	11/11/02	15		<10		
BSB-11	34.5	11/11/02	84.3		<10		
BSB-11	39.5	11/11/02	20		<10		
BSB-11	42	11/11/02	263		120		
BSB-11	44	11/11/02	12.1		<10		
BSB-11	9.5	11/11/02	<1		<10		
BSB-12	14.5	11/11/02	4320		57		
BSB-12	19.5	11/11/02	290		41		

All values reported in units of mg/kg.

Table 3-3
Petroleum Hydrocarbons in Soil
Former Angeles Chemcial Site

Location	Depth (feet)	Sample Date	Gasoline Range (C4-C12)	Gasoline Range (C8-C12)	Diesel Range (C14-C22)	Heavy Oil Range (C24-C40)	TRPH
BSB-12	24.5	11/11/02	1350		155		
BSB-12	28.5	11/11/02	17		<10		
BSB-12	34.5	11/11/02	367		14		
BSB-12	39.5	11/11/02	73		<10		
BSB-12	44.5	11/11/02	0.63 J		<10		
BSB-12	9	11/11/02	13.3		<10		
BSB-13	14.5	11/12/02		<10	<10	<10	
BSB-13	19.5	11/12/02		<10	<10	<10	
BSB-13	25	11/12/02		60	10	<10	
BSB-13	27	11/12/02		408	40	<10	
BSB-13	29.5	11/12/02		250	23	<10	
BSB-13	32	11/12/02		84	<10	<10	
BSB-13	34.5	11/12/02		287	30	<10	
BSB-13	39.5	11/12/02		<10	<10	<10	
BSB-13	4.5	11/12/02		602	37	<10	
BSB-13	9.5	11/12/02		78	<10	<10	
BSB-14	14.5	11/12/02		<10	<10	<10	
BSB-14	19.5	11/12/02		<10	<10	<10	
BSB-14	27	11/12/02		<10	<10	<10	
BSB-14	28.5	11/12/02		<10	<10	<10	
BSB-14	33	11/12/02		<10	<10	<10	
BSB-14	39.5	11/12/02		<10	<10	<10	
BSB-14	42	11/12/02		<10	<10	<10	
BSB-14	9.5	11/12/02		<10	<10	<10	
BSB-16	14.5	11/13/02	0.6		<10	<10	
BSB-16	19.5	11/13/02	<1		12	<10	
BSB-16	22	11/13/02	<1		<10	<10	
BSB-16	24.5	11/13/02	1440		<10	<10	
BSB-16	29.5	11/13/02	758		76	<10	
BSB-16	34.5	11/13/02	1		<10	<10	
BSB-16	39.5	11/13/02	<1		<10	<10	
BSB-16	4.5	11/13/02	10.9		<10	<10	
BSB-16	44.5	11/13/02	0.5		<10	<10	
BSB-16	49.5	11/13/02	<1		<10	<10	
BSB-16	9	11/13/02	21		<10	<10	
BSB-17	10	11/14/02		3000	200	<10	
BSB-17	14	11/14/02		8760	452	<10	
BSB-17	15	11/14/02		5300	350	<10	
BSB-17	20	11/14/02		5000	504	<10	
BSB-17	22.5	11/14/02		2150	171	<10	
BSB-17	25	11/14/02		1760	143	<10	
BSB-17	27.5	11/14/02		2070	183	<10	
BSB-17	30	11/14/02		254	29	<10	
BSB-17	35	11/14/02		80	8	<10	
BSB-17	40	11/14/02		<10	<10	<10	
BSB-17	45	11/14/02		<10	<10	<10	
E-11	1.5	3/18/03		<5	<10	<10	
E-11	10	3/18/03		10.4	<10	<10	
E-11	15	3/18/03		<5	<10	<10	
E-11	19.5	3/18/03		<5	<10	<10	
E-11	25	3/18/03		<5	<10	<10	
E-11	30	3/18/03	211	148	<10	<10	

All values reported in units of mg/kg.

Table 3-3
Petroleum Hydrocarbons in Soil
Former Angeles Chemcial Site

Location	Depth (feet)	Sample Date	Gasoline Range (C4-C12)	Gasoline Range (C8-C12)	Diesel Range (C14-C22)	Heavy Oil Range (C24-C40)	TRPH
E-11	35	3/18/03		<5	<10	<10	
E-11	40	3/18/03		<5	<10	<10	
E-11	5	3/18/03		11.2	<10	<10	
E-12	1.5	3/18/03		<5	<10	<10	
E-12	10	3/18/03		<5	<10	<10	
E-12	15	3/18/03	7450	5440	194	<10	
E-12	20	3/18/03		200	11	<10	
E-12	25.5	3/18/03		26	<10	<10	
E-12	5	3/18/03		<5	<10	<10	
MW-08	10	6/6/02	<1				
MW-08	15	6/6/02	<1				
MW-08	19	6/6/02	<1		<10	<10	
MW-08	24	6/6/02	2.1		<10	<10	
MW-08	29	6/6/02	417				
MW-08	3.5	6/6/02	<1				
MW-08	30	6/6/02	991		72	<10	
MW-08	32.5	6/6/02	3120		456	<10	
MW-08	35	6/6/02	358		17	<10	
MW-08	40	6/6/02	586		105	<10	
MW-08	42.5	6/6/02	7.6		<10	<10	
MW-09	10	6/7/02	<1				
MW-09	12.5	6/7/02			<10	<10	
MW-09	15	6/7/02	1.3				
MW-09	20	6/7/02	<1		<10	<10	
MW-09	25	6/7/02	<1		<10	<10	
MW-09	29	6/7/02	<1				
MW-09	3	6/7/02	<1				
MW-09	30	6/7/02			<10	<10	
MW-09	35	6/7/02	<1		<10	<10	
MW-09	40	6/7/02	<1		<10	<10	
MW-09	45	6/7/02	<1		<10	<10	
MW-09	50	6/7/02	<1		<10	<10	
MW-10	18.5	11/13/02	5.4		<10	<10	
MW-10	24.5	11/13/02	<1		<10	<10	
MW-10	27	11/13/02	201		15	<10	
MW-10	32	11/13/02	9550		178	<10	
MW-10	35	11/13/02	2100		78	<10	
MW-10	37	11/13/02	892		33	<10	
MW-10	40	11/13/02	26.3		<10	<10	
MW-12	10	11/15/02		<10	<10	<10	
MW-12	14.5	11/15/02		<10	<10	<10	
MW-12	19.5	11/15/02		<10	<10	<10	
MW-12	22	11/15/02		<10	<10	<10	
MW-12	24.5	11/15/02		<10	<10	<10	
MW-12	27	11/15/02		<10	<10	<10	
MW-12	29.5	11/15/02		<10	<10	<10	
MW-12	32.5	11/15/02		<10	<10	<10	
MW-12	32	11/15/02		<10	<10	<10	
MW-12	34.5	11/15/02		<10	<10	<10	
MW-12	39.5	11/15/02		238	17	<10	
MW-12	44.5	11/15/02		80	<10	<10	
MW-12	47	11/15/02		<10	<10	<10	

All values reported in units of mg/kg.

Table 3-3
Petroleum Hydrocarbons in Soil
Former Angeles Chemcial Site

DRAFT

Location	Depth (feet)	Sample Date	Gasoline Range (C4-C12)	Gasoline Range (C8-C12)	Diesel Range (C14-C22)	Heavy Oil Range (C24-C40)	TRPH
MW-12	5	11/15/02		<10	<10	<10	
MW-15	24.5	11/19/02		<10	<10	<10	
MW-15	25	11/19/02		<10	<10	<10	
MW-15	30	11/19/02		<10	<10	<10	
MW-15	35	11/19/02		<10	<10	<10	
MW-15	45	11/19/02		<10	<10	<10	
MW-15	50	11/19/02		<10	<10	<10	
MW-15	55	11/19/02		<10	<10	<10	
MW-16	10	11/19/02		<10	<10	<10	
MW-16	25	11/19/02		<10	15	<10	
MW-16	27.5	11/19/02		<10	<10	<10	
MW-16	39.5	11/19/02		<10	<10	<10	
MW-16	40	11/19/02		<10	<10	<10	
MW-17	24.5	11/20/02		<10	<10	<10	
MW-17	26.8	11/20/02		<10	<10	<10	
MW-17	29.5	11/20/02		<10	<10	<10	
MW-17	34.5	11/20/02		19	<10	<10	
MW-17	39.5	11/20/02		<10	<10	<10	
MW-17	9.5	11/20/02		<10	<10	<10	
MW-19	14.5	11/21/02		3990	156	<10	
MW-19	19.5	11/21/02		2730	200	<10	
MW-19	24.5	11/21/02		279	<10	<10	
MW-19	28	11/21/02		3380	212	<10	
MW-19	29.5	11/21/02		5750	296	<10	
MW-19	34	11/21/02		51	<10	<10	
MW-19	38	11/21/02		12	<10	<10	
MW-19	4.5	11/21/02		4910	492	32	
MW-19	44	11/21/02		<10	<10	<10	
MW-19	49.5	11/21/02		<10	<10	<10	
MW-19	54.5	11/21/02		<10	<10	<10	
SS-01	0	9/25/02	<1		<10	<10	
SS-02	0	9/25/02	<1		12	54	
RR-01	0	10/1/92					22200
RR-02	1.5	10/1/92					19500
RR-03	0	10/1/92					101000
RR-04	1.5	10/1/92					115
RR-05	0	10/1/92					156
RR-06	1.5	10/1/92					1390
RR-07	0	10/1/92					11500
SS-02	0	4/1/90					99

All values reported in units of mg/kg.

Table 3-4
Metals in Soil
Former Angeles Chemcial Site

DRAFT

Location	Depth	Sample Date	Arsenic	Barium	Beryllium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Vanadium	Zinc
BSB-01	1.5	6/5/02	<0.3	208	<2.5	17.6	10.2	20.2	47	<0.1	27	46	80
BSB-01	10.5	6/5/02	2.4	241	<2.5	20.5	15.8	17.4	11.2	<0.1	32.4	51	62
BSB-01	6.5	6/5/02	8.8	454	<2.5	22.3	15	26.6	9	<0.1	36.8	56	78
BSB-02	1.5	6/6/02	8.9	248	<2.5	14.9	17.8	31	21.4	<0.1	52	41	118
BSB-02	11.5	6/6/02	3	157	<2.5	13	13.8	16.2	5.4	<0.1	33.8	24	84
BSB-02	6.5	6/6/02	3.2	316	<2.5	21.5	23.4	41.2	12	<0.1	66.8	51	120
BSB-03	6.5	8/15/02	0.68	749	<2.5	23.6	14.2	31	7.4	<0.1	21.4	<5	26.8
BSB-03	11.5	8/15/02	<0.3	234	<2.5	17.9	9.4	15.6	4.5	<0.1	14.4	<5	21.2
BSB-04	6.5	8/15/02	0.6	867	<2.5	19.2	11	25.6	6.2	<0.1	19.6	<5	24
BSB-04	12	8/15/02	<0.3	242	<2.5	17.4	11	16	4.1	<0.1	14.4	<5	22.6
BSB-05	7	8/16/02	0.53	624	6	20.8	13.6	25.8	5.9	<0.1	20.2	<5	25
BSB-05	12	8/16/02	<0.3	411	<2.5	21.2	13	26.6	5.7	<0.1	18.6	<5	26.6
BSB-06	5	8/16/02	0.65	658	<2.5	21	14.6	27.2	6.2	<0.1	19.6	<5	24.4
BSB-06	9	8/16/02	0.3	150	<2.5	12.3	9.8	13.4	2.8	<0.1	11.2	<5	18.6
BSB-06	10	8/16/02	0.4	151	<2.5	12.1	11	15.4	2.6	<0.1	11.6	<5	20.6
BSB-07	15	8/19/02	<0.3	160	<2.5	14.6	5.9	12.3	2.7	<0.1	10.4	29	32
BSB-07	2.5	8/19/02	<0.3	394	<2.5	22	9.7	31.2	7.4	<0.1	18.3	31	49
BSB-07	7.5	8/19/02	0.6	129	<2.5	18.5	6.6	20.2	4.6	<0.1	13.5	39	34
BSB-08	10	8/19/02	<0.3	206	<2.5	16.6	5.8	14.5	3.2	<0.1	10.7	33	66
BSB-08	13	8/19/02	<0.3	194	<2.5	28.2	9	26.1	5.3	<0.1	16.4	49	713
BSB-08	5	8/19/02	1.2	215	<2.5	23.1	9.3	32.8	7.8	<0.1	18.5	38	48
BSB-09	15	8/20/02	0.5	378	<2.5	22	10.9	24.1	4.2	0.04	16.8	45	36.1
BSB-09	5	8/20/02	0.6	1130	<2.5	27.9	12.2	37.1	12.2	0.07	18.3	44.1	37.7
BSB-09	8	8/20/02	0.3	382	<2.5	19.3	9.7	20.1	3.6	0.03	11.8	36.1	25.6
BSB-10	12.5	8/20/02	<0.3	328	<2.5	19	12.8	24.7	4	0.07	16.9	54.6	33.9
BSB-10	2	8/20/02	0.5	458	<2.5	24.1	14.2	37.9	7.8	0.06	19.1	55	35.9
BSB-10	7.5	8/20/02	0.4	1480	<2.5	20.2	10.3	34.3	11	0.07	16.3	54.1	32.6
MW-08	1.5	6/6/02	2	143	<2.5	8.7	11	15.4	32.8	<0.1	27.8	19	106
MW-08	11.5	6/6/02	1.2	199	<2.5	14.4	13.2	19.2	6.6	<0.1	42.8	29	94
MW-08	6.5	6/6/02	8.3	364	<2.5	15.2	20.6	32.8	11	<0.1	54.6	39	104
MW-09	3	6/7/02	6.5	357	<2.5	20.2	23	36.4	12	<0.1	58.8	41	116
MW-09	5.5	6/7/02	6	578	<2.5	15.7	20.4	32.2	13	<0.1	52.8	36	104

All values reported in units of mg/kg.

Table 3-5
VOCs in Groundwater
Former Angeles Chemical Site

Location	Date	2-Chlorotoluene	4-Methyl-2-Pentanone	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	1,2-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Ethylbenzene	Isopropylbenzene	Methylene Chloride	MTBE
BSB-09	8/20/02	<5	<50	<50	522	<50	<5	<5	<5	2100	<5	3060	1950	<100	1530	<5	<5	<5
MW-01	1/1/90				10					21		270			nd		nd	
	2/1/94				194		<100	<600	<100	649	<100	2210			333		1220	
	8/1/95			85200	<250	43100				1300	<250	2840			650		<2500	
	11/1/00				<2500	3100				17000	<2500	3000	20000		960		1100	
	10/1/01		<1250	<1250	125	<1250				8190	<250	1200	10300		805		<1250	
	2/1/02		<625	<625	231	<625		<125		20600	<125	4050	29100		875		<250	
	2/15/02	nd	nd	nd	231	nd	nd	nd	nd	18400	nd	4050	29100 *		928	120	nd	nd
	6/1/02		<25	<25	300	<25		<5		18900	<5	4900	31100		1450		<5	
	6/14/02	<5	<25	<25	300	<25	<5	<5	<5	1320	<5	4900	7330		1380	<5	<5	<2
	10/1/02		<25	<25	245	<25		<5		10400	<5	3800	20700	<50	884	<5	<5	
	10/7/02	<5	<25	<25	245	<25	<5	<5	<5	10400	<5	3800	20700	<100	884	<5	<5	<2
	12/17/02	<5	<25	<25	85.5	<25	<5	<5	<5	1290	<5	1490	638	8350	<1	<5	<5	<2
	3/12/03	<5	8430 J	58200	925	30400	<5	<5	<5	4370	<5	15200	9220	1790 J	1500	<5	10600	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	15	<5	48	41	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	<5	<5	<100	<1	<5	<5	<2
MW-02	2/3/94				<100		<100	<600	<100	1130	<100	2460			1720		2980	
	8/1/95			191000	<250	71800				3880	<250	2570			890		9250	
	11/1/00				61	<10000				1800	<500	<500	9500		120		180	
	10/1/01		<250	<250	105	<250				1500	<50	1120	9150		197		<250	
	2/1/02		<62.5	<62.5	204	<62.5		119		2310	<12.5	1480	11100		115		18.5	
	2/15/02	12.5	nd	nd	204	nd	37	119	19.5	2310	nd	1480	11100		115	22.5	18.5	nd
	6/1/02		<25	<25	222	<25		<5		2700	<5	2090	14800		147		<5	
	6/14/02	<5	<25	<25	222	<25	<5	<5	<5	2700	<5	2090	14800		147	<5	<5	<2
	10/1/02		<25	<25	177	<25		<5		2550	<5	2100	10400	<50	469	<5	<5	
	10/7/02	<5	<25	<25	177	<25	53.9	<5	<5	2550	<5	2100	10400	<100	469	<5	<5	<2
	12/1/02		<25	<25	180	<25		<5		1920	<5	2230	11800	<50	590	<5	<5	
	12/18/02	<5	<25	<25	180	<25	<5	<5	<5	1920	<5	2230	11800	<100	590	<5	<5	<2
	3/12/03	<5	<25	<25	172	<25	<5	<5	<5	2180	<5	2490	11300	<100	614	<5	<5	<2
	6/11/03	<5	<25	<25	<1	<25	<5	4500	<5	1140	<5	1490	2270	<100	<1	<5	<5	<2
	9/17/03	<5	<25	<25	6	<25	<5	<5	<5	81.8	<5	108	402	<100	<1	<5	<5	<2
MW-03	2/3/94				63		<50	<300	<50	85	<50	2800			115		6530	
	8/1/95			100000	<250	36000				740	<250	6500			1680		<2500	
	11/1/00				73	<10000				800	<500	2900	5700		1000		5600	
	10/1/01		4130	<625	110	500				1030	<125	4090	7000		1550		<625	
	2/1/02		3470	3150	108	<500		<100		1350	<100	3900	7960		1360		3960	
	2/15/02	nd	3470	3150	108	nd	nd	nd	nd	1350	nd	3900	7960		1360	nd	3960	nd
	6/1/02		2850	<25	125	<25		<5		1340	<5	2690	6860		1470		<5	
	6/14/02	<5	2850	<25	125	<25	<5	<5	<5	1340	<5	2690	6860		1470	<5	<5	<2
	10/1/02		1410	<25	99.2	<25		<5		1130	<5	176	212	1090	945	<5	<5	
	10/7/02	<5	1410	<25	99.2	<25	<5	<5	<5	1130	<5	176	212	1090	945	<5	<5	<2
	12/1/02		<25	<25	137	<25		<5		1190	<5	196	595	<50	1150	<5	<5	
	12/19/02	<5	<25	<25	137	<25	<5	<5	<5	1190	<5	196 J	595	<100	1150	<5	<5	<2
	3/12/03	<5	<25	<25	127	<25	<5	<5	<5	1710	<5	1410	3090	<100	982	<5	1630	<2
	6/11/03	<5	<25	<25	<1	<25	<5	11500	<5	1020	<5	2370	5220	<100	722	<5	<5	1020
	9/18/03	<5	11100	76500	400	64000	<5	1030	<5	48500	<5	1490	9310	<100	1570	<5	<5	<2
MW-04	2/3/94				111		<100	<600	<100	1410	<100	806			1180		4760	
MW-05	10/7/02	<5	<25	<25	<1	<25	<5	<5	<5	9740	<5	3460	19700	<100	1040	<5	<5	<2
	12/18/02	<5	<25	<25	239	<25	<5	<5	<5	2460	<5	2950	15500	<100	751	<5	<5	<2
	3/12/03	<5	8580 J	24600	<1	19000	<5	<5	<5	43300	615 J	2630	21000	<100	1360	<5	<5	<2
	6/10/03	<5	<25	<25	85.2	<25	<5	<5	<5	2910	44 J	3140	1350	11400	<1	<5	<5	<2
MW-06	2/3/94				848		<50	<600	<100	2570	1240	1240			1910		20000	
	8/1/95			8800	560	5900				1800	<250	6200			2030		3850	
	10/1/01		<25000	<25000	110000	<25000				592000	<5000	417000	1060000		4320000		<5000	
MW-07	2/3/94				46		<5	<30	<5	2130	31	151			45		<50	
	8/1/95			<2500	<2500	2800				2730	<250	635			<250		<2500	
	11/1/00				65	1400				2800	<500	350	210		82		180	
	10/1/01		625	1190	55	980				2670	<25	355	194		107		<125	
	2/1/02		376	746	63.2	<50		17		5490	43.4	778	268		94.4		<20	
	2/15/02	nd	376	746	63.2	nd	15.9	17	nd	5490 *	43.4	778 *	268		94.4	nd	nd	nd
	6/1/02		388	<25	<1	<25		<5		4150	<5	423	238		124		<5	
	6/14/02	<5	388	<25	<1	<25	<5	<5	<5	4150	<5	423	238		124	<5	<5	<2
	10/1/02		276	<25	121	<25		<5		5680	<5	547	311	27200	213	<5	<5	
	10/7/02	<5	276	<25	121	<25	<5	<5	<5	5680	<5	547	311	27200	213	<5	<5	<2
	12/1/02		<25	<25	<1	<25		<5		3530	<5	538	268	11500	50	<5	<5	
	12/17/02	<5	<25	<25	<1	<25	<5	<5	<5	3530	<5	538	268	11500	50	<5	<5	<2
	3/11/03	<5	<25	<25	62.6	<25	<5	248	<5	3750	<5	213	225	21900	100	<5	<5	<2
	6/11/03	<5	<25	<25	61	<25	<5	311	<5	3470	<5	364	214	22300	85.3	<5	<5	<2
MW-09	6/1/02		<25	<25	90.8	<25		<5		1210	<5	1540	612		<1		<5	
	6/14/02	<5	<25	<25	90.8	<25	<5	<5	<5	1210	<5	1540	612		<1	<5	<5	<2
	10/1/02		<25	<25	893	<25		<5		1390	<5	1620	736	6290	<1	<5	<5	
	10/7/02	<5	<25	<25	893	<25	<5	<5	<5	1390	<5	1620	736	6290	<1	<5	<5	<2
	12/1/02		<25	<25	85.2	<25		<5		1190	<5	1480	630	6540	<1	<5	<5	
	12/17/02	<5	<25	<25	85.2	<25	<5	<5	<5	1190	<5	1480	630	6540	<1	<5	<5	<2
	3/10/03	<5	<25	<25	54	<25	<5	<5	<5	1020	11.5 J	1100	483	7200	<1	9 J	<5	<2
	6/10/03	<5	<25	<25	64.4	<25	<5	<5	<5	1480	<5	1290	552	12800	<1	<5	<5	<2
	9/17/03	<5	<25	<25	75	<25	<5	<5	<5	1950	<5	1620	648	7150	<1	<5	<5	<2
MW-10	12/1/02		<25	29900	<1	15300		<5		42400	<5	2640	23300	<50	1480	<5	<5	
	12/19/02	<5	<25	29900	<1	15300	<5	<5	<5	42400	<5	2640	23300	<100	1480	<5	<5	<2
	3/12/03	<5	8160	25600	302	21100	<5	<5	<5	41900	<5	2550	20900	<100	1280	<5	<5	<2
	6/11/03	<5	6020	46400	250	20200	<5	5000	<5	51700	<5	3370	24600	<100	1400	<5	<5	<2
	9/18/03	<5	10900	73000	340	58000	<5	940 J	<5	47400	<5	1760	9290	<100	1360	<5	<5	<2
	11/6/03	<5	2860	18700	405	11700	<5	696	<5	91100	<5	5440	35800	<100	1360	<5	<5	<2

Table 3-5
VOCs in Groundwater
Former Angeles Chemical Site

Location	Date	Naphthalene	n-Butylbenzene	n-Propylbenzene	T-Butyl Alcohol	Tetrachloroethene	Toluene	trans-1,2-Dichloroethen	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes(Total)
BSB-09	8/20/02	<5	<5	<5	<30	<5	2130	<5	<5	3140	1060	<5	1020	608	<2	1470
MW-01	1/1/90					100	10			120	210					18
	2/1/94					662	560	<100		9370	7160	<100			<20	2192
	8/1/95					<250	5870			4380	<250					
	11/1/00					<2500	4000	<2500		<2500	<2500					3400
	10/1/01	185				<100	2470	<250		<250	<100		1590	470	1350	2770
	2/1/02	195				20	4880	<125		<125	20		2800	955	1060	3760
	2/15/02	365	160	225	nd	20 J	4880	nd	nd	nd	20 J	nd	3000	955	1060	3690
	6/1/02	<5		<5		24.8	6180	<5		<5	<5		3850	1170	<2	5240
	6/14/02	148	<5	<5	<10	147	6180	<5	<5	<5	<5	<5	609	1170	<2	5240
	10/1/02	<5		<5		<2	5390	<5		<5	<2		2120	574	2860	3570
	10/7/02	<5	<5	<5	<10	<2	5390	<5	<5	<5	<2	<5	2120	574	2860	3570
	12/17/02	<5	<5	<5	<10	180	<1	<5	<5	33.2	46.7	<5	<5	<5	107	<1
	3/12/03	1190 J	<5	<5	<10	910 J	8870	<5	<5	27700	2070	<5	2650	500 J	<2	3200
	6/9/03	<5	<5	<5	<10	169	<1	<5	<5	<5	71.5	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	11	<1	<5	<5	<5	11.2	<5	<5	<5	<2	<1
MW-02	2/3/94					2150	7390	<100		3470	3040	<100			<20	7790
	8/1/95					377	6150			1120	535					
	11/1/00					<500	57	<500		<500	<500					<500
	10/1/01	76				<20	26	<50		<50	<20		18.9	62.9	75	<2
	2/1/02	64				3.3	26.2	<12.5		<12.5	2.5		231	57.8	197	14.8
	2/15/02	64	14	26.7	nd	3.3	26.2	nd	nd	nd	2.5 J	nd	231	57.8	197	14.8
	6/1/02	89.4		28.5		<5	102	<5		<5	<5		<5	57.5	<2	152
	6/14/02	89.4	<5	28.5	<10	<5	102	<5	<5	<5	<5	<5	<5	57.5	<2	152
	10/1/02	62.2		44.2		<2	39	<5		<5	<2		116	67.8	2710	73
	10/7/02	62.2	<5	44.2	<10	<2	39.5	<5	<5	<5	<2	<5	116	67.8	2710	73.2
	12/1/02	<5		<5		<2	158	<5		<5	<2		232	<5	2720	355
	12/18/02	<5	<5	<5	<10	<2	158	<5	<5	<5	<2	<5	232 J	<5	2720	355
	3/12/03	<5	<5	<5	<10	<2	<1	<5	<5	<5	<2	<5	380 J	<5	1640	316 J
	6/11/03	<5	<5	<5	<10	258 J	<1	<5	<5	160 J	182 J	<5	<5	<5	4500	170
	9/17/03	<5	<5	<5	<10	45.1	3.1	<5	<5	6.0 J	18.8	<5	<5	<5	70.6	<1
MW-03	2/3/94					5370	579	<50		444	1730	<50			<10	1014
	8/1/95					6200	9250			1010	4350					
	11/1/00					130	3700	<500		70	1500					2500
	10/1/01	<125				130	5150	<125		<125	100		345	145	<5	3720
	2/1/02	122				302	4520	<100		<100	260		668	126	896	3070
	2/15/02	122	nd	nd	nd	302	4520	nd	nd	nd	260	120	668	126	896	3070
	6/1/02	178		<5		133	4780	<5		<5	134		618	<5	<2	3690
	6/14/02	178	<5	<5	<10	133	4780	<5	<5	<5	134	<5	618	<5	<2	3690
	10/1/02	59.2		<5		39.3	4810	<5		<5	28		299	57.8	12200	2570
	10/7/02	59.2	<5	<5	<10	39.3	4810	<5	<5	<5	28	<5	299	57.8	12200	2570
	12/1/02	<5		<5		<2	3770	<5		<5	<2		356	<5	12700	2900
	12/19/02	<5	<5	<5	<10	<2	5770	<5	<5	<5	<2	<5	356	<5	12700	2900
	3/12/03	206 J	<5	<5	<10	411	2310	<5	<5	<5	1930	<5	441 J	<5	7870	2100
	6/11/03	<5	<5	<5	<10	318	2080	<5	<5	<5	806	<5	378 J	<5	2380	1760
	9/18/03	<5	<5	<5	<10	<2	16000	<5	<5	4800	<2	<5	1690	449	4220	4950
MW-04	2/3/94					3320	12700	<100		36200	14300	<100			<20	4362
MW-05	10/7/02	265	<5	<5	<10	<2	5060	<5	<5	<5	<2	<5	2510	700	2260	4010
	12/18/02	<5	<5	<5	<10	<2	185	<5	<5	<5	<2	<5	278	<5	3480	404
	3/12/03	970	<5	<5	<10	<2	12000	<5	<5	12100	<2	<5	1600	<5	4590	4700
	6/10/03	<5	<5	<5	<10	342	<1	<5	<5	34 J	328	<5	<5	<5	356	<1
MW-06	2/3/94					2130	13500	<100		114000	1450	<100			<10	5420
	8/1/95					880	17200			189000	7650					
	10/1/01	1680000				531000	9010000	<5000		2810000(	753000		2210000(	5400000	<5000	1037000(
MW-07	2/3/94					134	398	<5		90	45	<5			<1	186
	8/1/95					<250	398			<250	<250					
	11/1/00					<500	800	<500		<500	<500					247
	10/1/01	85				100	975	<25		<25	<10		200	25	188	301
	2/1/02	74.8				8.2	1330	<10		<10	6.8		234	45.6	517	280
	2/15/02	74.8	18.4	nd	nd	8.2	1330	nd	nd	nd	6.8	nd	234	45.6	517	280
	6/1/02	116		<5		<5	1280	<5		<5	<5		238	<5	<2	354
	6/14/02	116	<5	<5	<10	<5	1280	<5	<5	<5	<5	<5	238	<5	<2	354
	10/1/02	<5		<5		<2	2560	<5		<5	<2		327	<5	684	576
	10/7/02	<5	<5	<5	<10	<2	2560	<5	<5	<5	<2	<5	327	<5	684	576
	12/1/02	<5		<5		<2	541	<5		<5	<2		<5	<5	423	121
	12/17/02	<5	<5	<5	<10	<2	541	<5	<5	<5	<2	<5	<5	<5	423	121
	3/11/03	110 J	<5	<5	<10	<2	938	<5	<5	<5	<2	<5	225	30.0 J	200	318
	6/11/03	80.3 J	<5	<5	<10	<2	724	<5	<5	<5	<2	<5	152	<5	360	238
MW-09	6/1/02	<5		<5		122	<1	<5		<5	<5		<5	<5	<2	<1
	6/14/02	<5	<5	<5	<10	122	<1	<5	<5	<5	<5	<5	<5	<5	<2	<1
	10/1/02	<5		<5		190	<1	<5		92	56.5		<5	<5	123	<1
	10/7/02	<5	<5	<5	<10	190	<1	<5	<5	92	56.6	<5	<5	<5	123	<1
	12/1/02	<5		<5		204	<1	<5		32.3	50.4		<5	<5	107	<1
	12/17/02	<5	<5	<5	<10	204	<1	<5	<5	32.3	50.4	<5	<5	<5	107	<1
	3/10/03	<5	<5	<5	<10	136	<1	<5	<5	35	39	<5	<5	<5	92	<2
	6/10/03	<5	<5	<5	<10	132	<1	<5	<5	18.6 J	41.9	<5	<5	<5	173	<1
	9/17/03	<5	<5	<5	<10	131	<1	<5	<5	<5	47	<5	<5	<5	296	<1
MW-10	12/1/02	<5		<5		<2	19600	<5		13800	<2		<5	<5	4100	4690
	12/19/02	<5	<5	<5	<10	<2	19600	<5	<5	13800	<2	<5	<5	<5	4100	4690
	3/12/03	568	<5	<5	<10	<2	12000	<5	<5	12300	<2	<5	1590 J	404	3690	2330
	6/11/03	450 J	<5	<5	<10	<2	10900	<5	<5	8430	<2	<5	1740	398 J	3410	4590
	9/18/03	<5	<5	<5	<10	<2	13800	<5	<5	4510	<2	<5	1430	320 J	4510	4460
	11/6/03	253 J	<5	235 J	<10	<2	16700	<5	<5	8360	<2	<5	2050	472 J	5250	6130

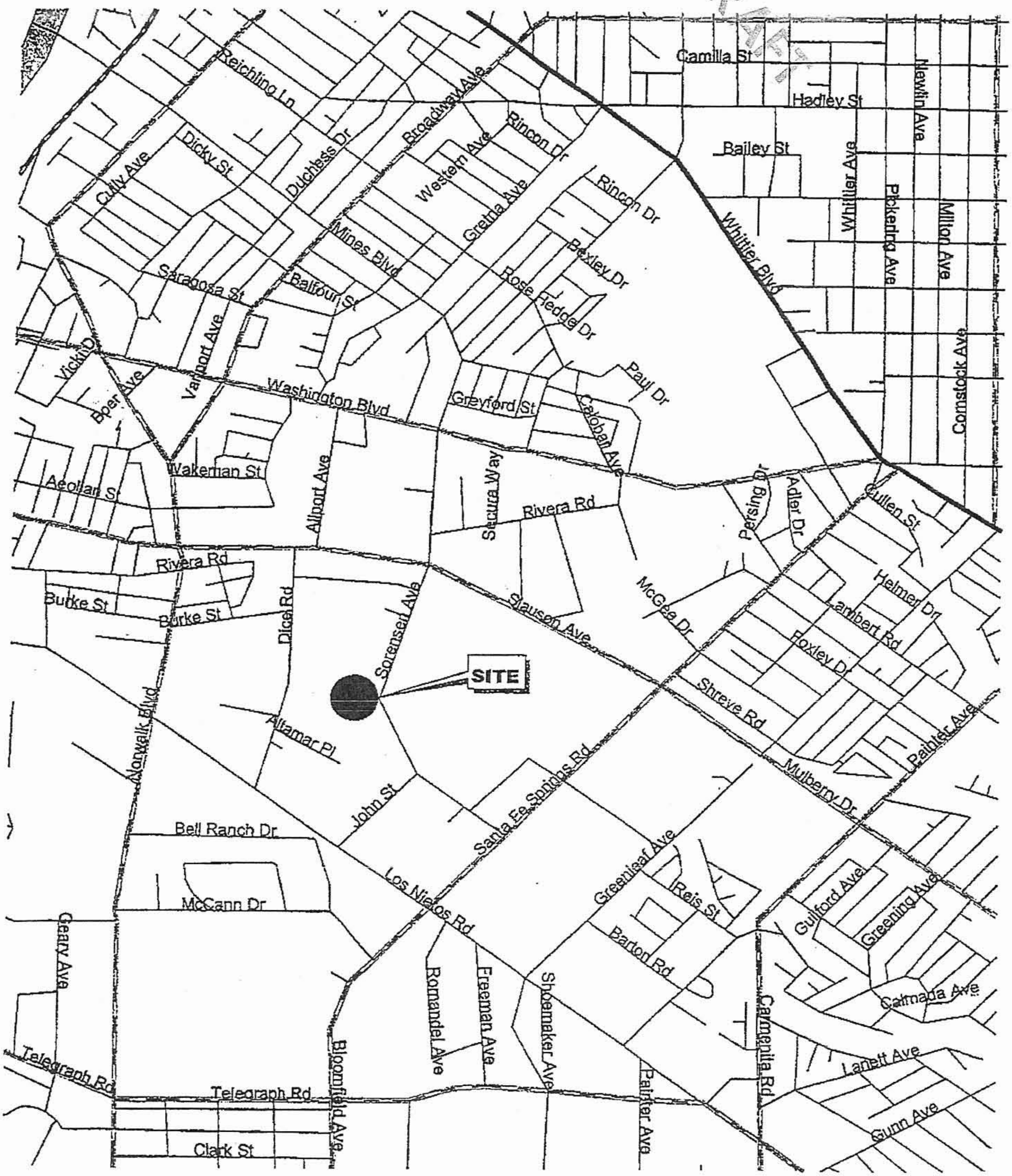
Table 3-5
VOCs in Groundwater
Former Angeles Chemical Site

Location	Date	2-Chlorotoluene	4-Methyl-2-Pentanone	Acetone	Benzene	2-Butanone (MEK)	Chlorobenzene	Chloroethane	1,2-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Ethylbenzene	Isopropylbenzene	Methylene Chloride	MTBE
MW-11	12/1/02		3540	662	431	1160		<5		19400	<5	3460	6700	<50	967	<5	<5	
	12/19/02	<5	3540	662	431	1160	<5	<5	<5	19400	<5	3460	6700	<100	967	<5	<5	<2
	3/12/03	<5	3680	6760	974	15600	<5	989	<5	48800	228	2940	10100	<100	1650	251 J	<5	<2
	6/10/03	<5	5340	13600	520	5860	<5	760 J	<5	37800	<5	1480	8740	<100	940	<5	<5	<2
	9/18/03	<5	1370	6950	775	5580	<5	1700	<5	43000	103 J	1050	6950	<100	1010	165	<5	<2
	11/6/03	<5	3280	3550	914	5920	<5	999	<5	72000	<5	2940	26700	<100	1510	<5	<5	<2
MW-12	12/1/02		<25	<25	19.5	<25		<5		3930	<5	154	180	<50	270	89.5	<5	
	12/17/02	<5	<25	<25	19.5	<25	<5	<5	<5	3930	<5	154	180	<100	270	89.5	<5	<2
	3/11/03	<5	<25	<25	13.3	<25	<5	<5	<5	1600	<5	16.5 J	18.6 J	<25	200	68.8	<5	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	354	<5	29.2	24.8	<100	11.1	<5	<5	<2
	9/17/03	<5	<25	<25	5.5	<25	<5	<5	<5	505	<5	14.5	8.0 J	<100	52.5	17	<5	<2
MW-13	12/1/02		<25	<25	1.0	<25		<5		17.3	<5	38.5	46.5	<50	<1	<5	<5	
	12/17/02	<5	<25	<25	1	<25	<5	<5	<5	17.3	<5	38.5	46.5	<100	<1	<5	<5	<2
	3/10/03	<5	<25	<25	<1	<25	<5	<5	<5	6.4	<5	16.8	17.6	29	<1	<5	<5	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	11.5	<5	44.2	40	<100	<1	<5	<5	<2
	9/17/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	27.2	25.2	<100	2	<5	<5	<2
MW-14	12/1/02		<25	<25	<1	<25		<5		171	<5	142	664	<50	334	<5	<5	
	12/18/02	<5	<25	<25	<1	<25	<5	<5	<5	171	<5	142	664	<100	334	<5	<5	<2
	3/11/03	<5	<25	<25	<1	<25	<5	<5	<5	150	<5	125	363	<25	25.3	<5	<5	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	29.6	5.8	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	5.5	<25	<5	<5	<5	101	<5	274	49	<100	<1	<5	<5	<2
MW-15	12/1/02		<25	<25	<1	<25		<5		79.8	<5	52.4	332	<50	<1	<5	<5	
	12/18/02	<5	<25	<25	<1	<25	<5	<5	<5	79.8	<5	52.4	332	<100	<1	<5	<5	<2
	3/10/03	<5	<25	<25	<1	<25	<5	<5	<5	117	<5	60.8	496	<25	<1	<5	<5	<2
	6/9/03	<5	<25	<25	5.7	<25	<5	<5	<5	107	<5	124	617	<100	<1	<5	<5	15.6
	9/17/03	<5	<25	<25	5.6	<25	<5	<5	<5	88	<5	98	436	<100	<1	<5	<5	<2
MW-16	12/1/02		<25	<25	79.0	<25		<5		3930	28	1530	975	16500	<1	<5	<5	
	12/17/02	<5	<25	<25	79	<25	25	<5	<5	3930	28	1530	975	16500	<1	<5	<5	<2
	3/11/03	<5	<25	<25	82.5	<25	26 J	<5	<5	3130	57.5	2470	1150	6850	<1	<5	<5	<2
	6/10/03	<5	<25	<25	97.5	<25	<5	<5	<5	3330	<5	3500	1540	12000	<1	<5	<5	<2
	9/17/03	<5	<25	<25	72	<25	<5	<5	<5	4450	<5	2470	998	<100	<1	<5	<5	<2
	11/6/03	<5	<25	<25	76	<25	<5	103 J	<5	4650	47.5 J	1480	762	<100	38.5	165	<5	<2
MW-17	12/1/02		<25	<25	<1	<25		<5		13.0	<5	18.6	36.0	<50	<1	<5	<5	
	12/17/02	<5	<25	<25	<1	<25	<5	<5	<5	13	<5	18.6	36	<100	<1	<5	<5	<2
	3/10/03	<5	<25	<25	<1	<25	<5	<5	<5	2.5 J	<5	17.1	7.1	<25	<1	<5	<5	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	16	2.2	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	14.2	<5	<100	<1	<5	<5	<2
MW-18	12/1/02		<25	26000	610	9300		<5		4390	<5	6850	18100	<50	425	<5	<5	
	12/19/02	<5	<25	26000	610	9300	<5	<5	<5	4390	<5	6850	18100	<100	425	<5	<5	<2
	3/12/03	<5	7400 J	39700	<1	23900	<5	<5	<5	6700	<5	5290	21200	<100	1050	<5	<5	<2
	6/11/03	<5	12600	62700	392	29800	<5	1970	<5	9820	<5	4610	23900	<100	1010	<5	<5	<2
	9/18/03	<5	4100	44200	360	32000	<5	460 J	<5	7040	<5	4260	15900	<100	740	<5	<5	<2
	11/6/03	<5	7020	99800	850	72900	<5	551	<5	8650	<5	4260	27500	<100	1300	<5	<5	<2
MW-19	12/1/02		<25	70000	1160	18500		<5		5150	<5	17700	11800	<50	1710	<5	<5	
	12/19/02	<5	<25	70000	1160	18500	<5	<5	<5	5150	<5	17700	11800	<100	1710	<5	<5	<2
	3/12/03	<5	10100 J	70200	1100	28900	<5	<5	<5	5110	<5	18600	11100	<100	2270	<5	12500	<2
	6/11/03	<5	14400	105000	1390	43800	<5	2860	<5	6840	<5	24200	13000	<100	2480	<5	12600	<2
MW-20	12/1/02		<25	<25	<1	<25		<5		16.2	<5	25.6	9.3	176	<1	<5	<5	
	12/18/02	<5	<25	<25	<1	<25	<5	<5	<5	16.2	<5	25.6	9.3	176	<1	<5	<5	<2
	3/10/03	<5	<25	<25	<1	<25	<5	<5	<5	18	<5	16.5	6.9	112	<1	<5	<5	<2
	6/9/03	<5	<25	<25	<1	<25	<5	<5	<5	47.6	<5	246	7	<100	<1	<5	<5	<2
	9/17/03	<5	<25	<25	<1	<25	<5	<5	<5	28.5	<5	45.7	4.6	88 J	<1	<5	<5	<2
MW-21	12/1/02		<25	<25	7.9	<25		<5		141	<5	207	324	<50	<1	<5	<5	
	12/18/02	<5	<25	<25	7.9	<25	<5	<5	<5	141	<5	207	324	<100	<1	<5	<5	<2
	3/10/03	<5	<25	<25	9	<25	<5	<5	<5	276	<5	280	543	<25	<1	<5	<5	18.5
	6/10/03	<5	<25	<25	18	<25	<5	<5	<5	535	<5	755	1060	<100	31	<5	<5	<2
	9/17/03	<5	<25	<25	53	<25	<5	<5	<5	1370	<5	1800	2450	<100	5.5	16.5 J	<5	<2
MW-22	12/19/02	<5	1560	<25	131	<25	<5	<5	<5	1270	<5	215 J	331	<100	1180	<5	<5	<2
	6/11/03	<5	6530	58000	256	23400	<5	<5	<5	56800	<5	3770	26800	<100	1380	<5	<5	<2
	6/25/03	<5	<25	<25	13.5	<25	15.2 J	<5	<5	1200	<5	155	3860	<100	<1	<5	113	<2
MW-23	6/24/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	2.0 J	<5	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	<1	<25	<5	<5	<5	3.1 J	<5	<5	8.7	<100	<1	<5	<5	<2
MW-24	6/24/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	<5	<5	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	<5	<5	<100	<1	<5	<5	<2
MW-25	6/24/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	4.2 J	<5	<100	<1	<5	<5	<2
	9/16/03	<5	<25	<25	<1	<25	<5	<5	<5	5	<5	<5	2.8 J	<100	<1	<5	<5	<2
MW-26	6/25/03	<5	9250	34100	125	11300	<5	<5	<5	931	<5	2340	939	<100	1620	<5	10600	<2
	9/17/03	<5	7350	24500	270	11000	<5	<5	<5	1670	<5	5600	2130	<100	2900	<5	14600	<2
SR-01	2/11/03	<5	<25	<25	<1	<25	<5	<5	<5	<5	<5	<5	<5	<100	<1	<5	<5	<2

Table 3-5
VOCs in Groundwater
Former Angeles Chemical Site

Location	Date	Naphthalene	n-Butylbenzene	n-Propylbenzene	T-Butyl Alcohol	Tetrachloroethene	Toluene	trans-1,2-Dichloroethen	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes(Total)
MW-11	12/1/02	<5		259		<2	1230	<5		52.8	<2		2120	675	198	748
	12/19/02	<5	<5	259	<10	<2	1230	<5	<5	52.8 J	<2	<5	2120	675	198	748
	3/12/03	222	<5	462	<10	<2	3830	<5	<5	<5	<2	<5	2950	903	1180	1620
	6/10/03	<5	<5	<5	<10	<2	4620	<5	<5	<5	<2	<5	1400	440 J	1830	1560
	9/18/03	<5	<5	303	<10	<2	4030	<5	<5	<5	<2	<5	1830	570	1510	1320
	11/6/03	256 J	<5	350 J	<10	<2	4700	<5	<5	<5	<2	<5	2000	590	2810	1810
MW-12	12/1/02	97		89.5		<2	29.5	<5		21	<2		1640	765	1100	242
	12/17/02	97	46.5	89.5	<10	<2	29.5	<5	<5	21	<2	<5	1640	765	1100	242
	3/11/03	134	25.4 J	191	<10	<2	14.5	<5	<5	14.0 J	<2	<5	703	411	66.6	28.1
	6/9/03	<5	<5	<5	<10	<2	<1	<5	<5	19	<2	<5	20	19	36	<1
	9/17/03	22	<5	45	<10	12.5	<1	<5	<5	8.7 J	7.5	<5	110	92	36	9
MW-13	12/1/02	<5		<5		97.1	1.2	<5		<5	77.2		<5	<5	6.2	<1
	12/17/02	<5	<5	<5	<10	97.1	1.2	<5	<5	<5	77.2	14.4	<5	<5	6.2	<1
	3/10/03	89.4	<5	<5	<10	11	<1	<5	<5	1.4 J	28.8	4.9 J	<5	<5	2.6	<2
	6/9/03	<5	<5	<5	<10	161	<1	<5	<5	<5	72.7	<5	<5	<5	3.8	<1
	9/17/03	<5	<5	<5	<10	145	<1	<5	<5	<5	95.2	<5	<5	<5	<2	<1
MW-14	12/1/02	<5		<5		<2	2840	<5		230	<2		270	106	<2	1760
	12/18/02	<5	<5	<5	<10	<2	2840	<5	<5	230	<2	<5	270	106 J	<2	1760
	3/11/03	<5	<5	<5	<10	<2	230	<5	<5	77.5	<2	<5	30.0 J	<5	<2	100
	6/9/03	<5	<5	<5	<10	21.8	<1	<5	<5	3.4	4	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	28.3	<1	<5	<5	8.9	12.1	<5	<5	<5	5.2	<1
MW-15	12/1/02	<5		<5		<2	14.4	<5		<5	<2		<5	<5	93.1	<1
	12/18/02	<5	<5	<5	<10	<2	14.4	<5	<5	<5	<2	<5	<5	<5	93.1	<1
	3/10/03	27.5	<5	<5	<10	<2	<1	<5	<5	<5	134	<5	<5	<5	77.8	<2
	6/9/03	<5	<5	<5	<10	29.5	<1	<5	<5	10.7	13.6	<5	<5	<5	49	<1
	9/17/03	<5	<5	<5	<10	36	2	<5	<5	6.4 J	16	<5	<5	<5	51	<1
MW-16	12/1/02	<5		<5		268	<1	<5		<5	274		<5	<5	555	<1
	12/17/02	<5	<5	<5	<10	268	<1	<5	<5	<5	274	<5	<5	<5	555	<1
	3/11/03	55.3 J	<5	<5	<10	350	<1	<5	<5	33.5	400	<5	238	<5	387	<2
	6/10/03	<5	<5	<5	<10	485	<1	<5	<5	42.5 J	438	<5	<5	<5	395	<1
	9/17/03	<5	<5	<5	<10	273	<1	<5	<5	<5	2530	<5	<5	<5	588	<1
	11/6/03	<5	<5	<5	<10	230	220	<5	<5	<5	198	<5	<5	<5	399	113
MW-17	12/1/02	<5		<5		8.1	<1	<5		6.0	3.0		<5	<5	<2	<1
	12/17/02	<5	<5	<5	<10	8.1	<1	<5	<5	6	3	<5	<5	<5	<2	<1
	3/10/03	116	<5	<5	<10	25	<1	<5	<5	9.5	7.4	<5	238	<5	<2	<2
	6/9/03	<5	<5	<5	<10	35.9	<1	<5	<5	<5	6.5	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	15.1	<1	<5	<5	8	3.9	<5	<5	<5	<2	<1
MW-18	12/1/02	<5		<5		534	1730	<5		1150	946		1880	528	<2	2690
	12/19/02	<5	<5	<5	<10	534	1730	<5	<5	1150	946	<5	1880	528	<2	2690
	3/12/03	1130 J	<5	<5	<10	<2	4970	<5	<5	665 J	610 J	<5	2490	635 J	<2	4200
	6/11/03	276 J	<5	<5	<10	<2	5510	<5	<5	260 J	176 J	<5	2070	506 J	<2	3650
	9/18/03	<5	<5	<5	<10	<2	3700	<5	<5	420 J	<2	<5	1680	400 J	800	2620
	11/6/03	265 J	<5	323 J	<10	<2	4140	<5	<5	1900	<2	<5	3160	762	301	4980
MW-19	12/1/02	<5		<5		1240	13500	<5		21500	1740		2500	<5	<2	3940
	12/19/02	<5	<5	<5	<10	1240	13500	<5	<5	21500	1740	<5	2500	<5	<2	3940
	3/12/03	1610 J	<5	<5	<10	1480	11600	<5	<5	37800	2360	<5	4660	845 J	630 J	4960
	6/11/03	3250	<5	<5	<10	1460	13300	<5	<5	61200	3820	<5	8090	1530	<2	6040
MW-20	12/1/02	<5		<5		9.7	3.3	<5		<5	2.9		<5	<5	<2	<1
	12/18/02	<5	<5	<5	<10	9.7	3.3	<5	<5	<5	2.9	<5	<5	<5	<2	<1
	3/10/03	<5	<5	<5	374	3.3	<1	<5	<5	<5	1.5 J	<5	<5	<5	<2	<2
	6/9/03	<5	<5	<5	<10	48.9	7.2	<5	19.5	25	10	<5	19.5	<5	<2	8.3
	9/17/03	<5	<5	<5	<10	18.3	<1	<5	<5	8.6	6.2	<5	<5	<5	<2	<1
MW-21	12/1/02	<5		<5		53.1	6	<5		<5	55.7		<5	<5	28.1	<1
	12/18/02	<5	<5	<5	<10	53.1	6.7	<5	<5	<5	55.7	<5	<5	<5	28.1	<1
	3/10/03	<5	<5	<5	226	17.8	<1	<5	<5	14.0 J	31.7	<5	<5	<5	22.6	8.4
	6/10/03	<5	<5	<5	<10	159 (new	<1	<5	<5	70	95	<5	18.5	<5	<2	<1
	9/17/03	<5	<5	10.5 J	<10	232	10	12.0 J	<5	150	180	<5	20.5 J	<5	31.5	93
MW-22	12/19/02	<5	<5	<5	<10	<2	6700	<5	<5	<5	<2	<5	345	<5	13200	3100
	6/11/03	494	<5	<5	<10	<2	10800	<5	<5	8560	<2	<5	1840	424	3560	4540
	6/25/03	<5	<5	<5	<10	<2	<1	<5	<5	<5	<2	<5	<5	<5	88.9	<1
MW-23	6/24/03	<5	<5	<5	<10	4	<1	<5	<5	<5	2.3	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	4.1	<1	<5	<5	<5	<2	<5	<5	<5	<2	<1
MW-24	6/24/03	<5	<5	<5	<10	4.1	<1	<5	<5	<5	2.3	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	10.7	<1	<5	<5	<5	11.5	<5	<5	<5	<2	<1
MW-25	6/24/03	<5	<5	<5	<10	12.3	<1	<5	<5	<5	20.4	<5	<5	<5	<2	<1
	9/16/03	<5	<5	<5	<10	33.4	<1	<5	<5	<5	21.5	<5	<5	<5	<2	<1
MW-26	6/25/03	135 J	<5	<5	<10	1920	<1	<5	<5	1250	1330	<5	<5	<5	<2	1050
	9/17/03	125 J	<5	<5	<10	2930	10500	120	<5	1790	2100	<5	555	170 J	<2	6870
SR-01	2/11/03	<5	<5	<5	<10	<2	<1	<5	<5	<5	<2	<5	<5	<5	<2	<1

FIGURES

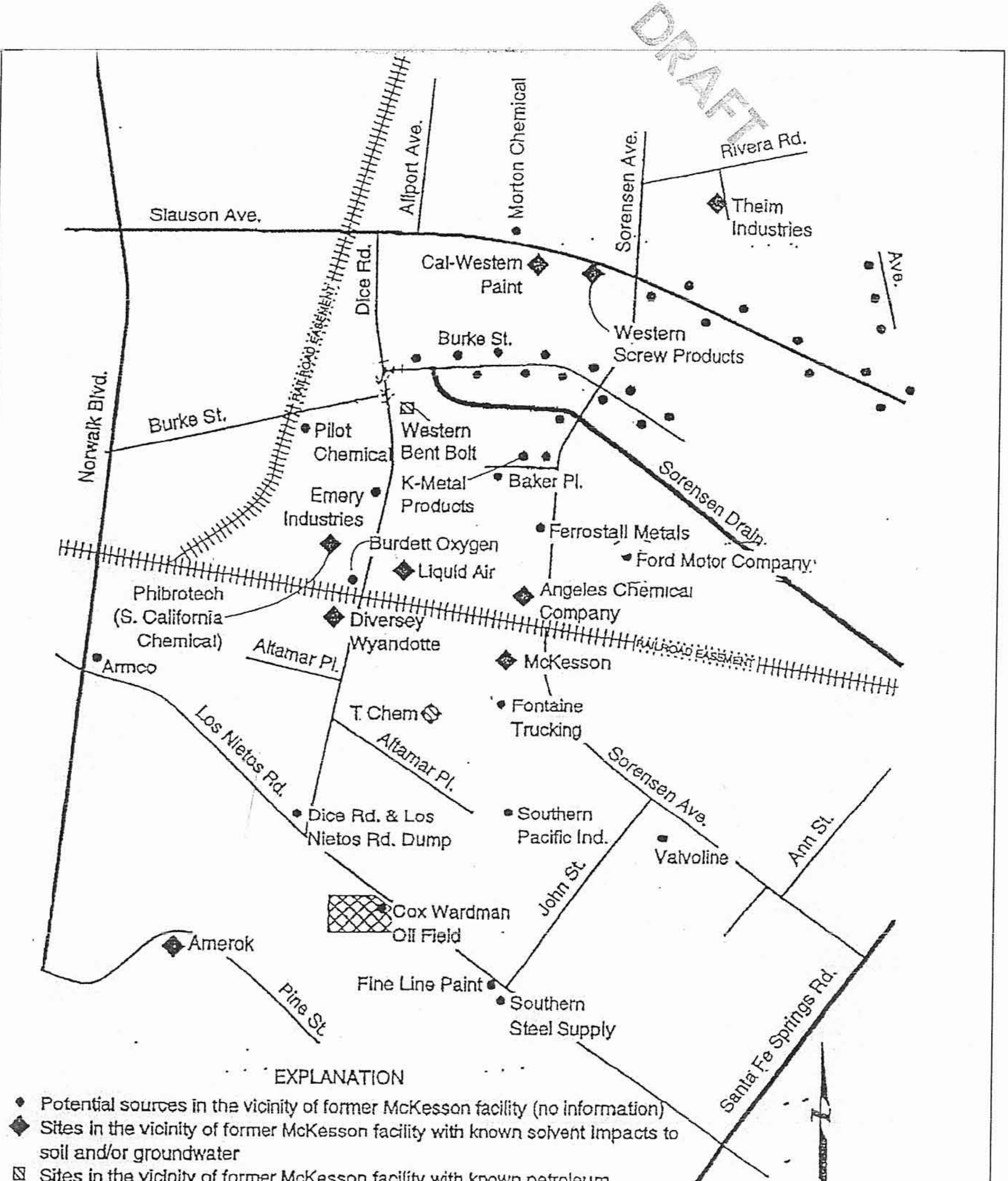


Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization
February 2004

Figure 1-1
Site Location Map



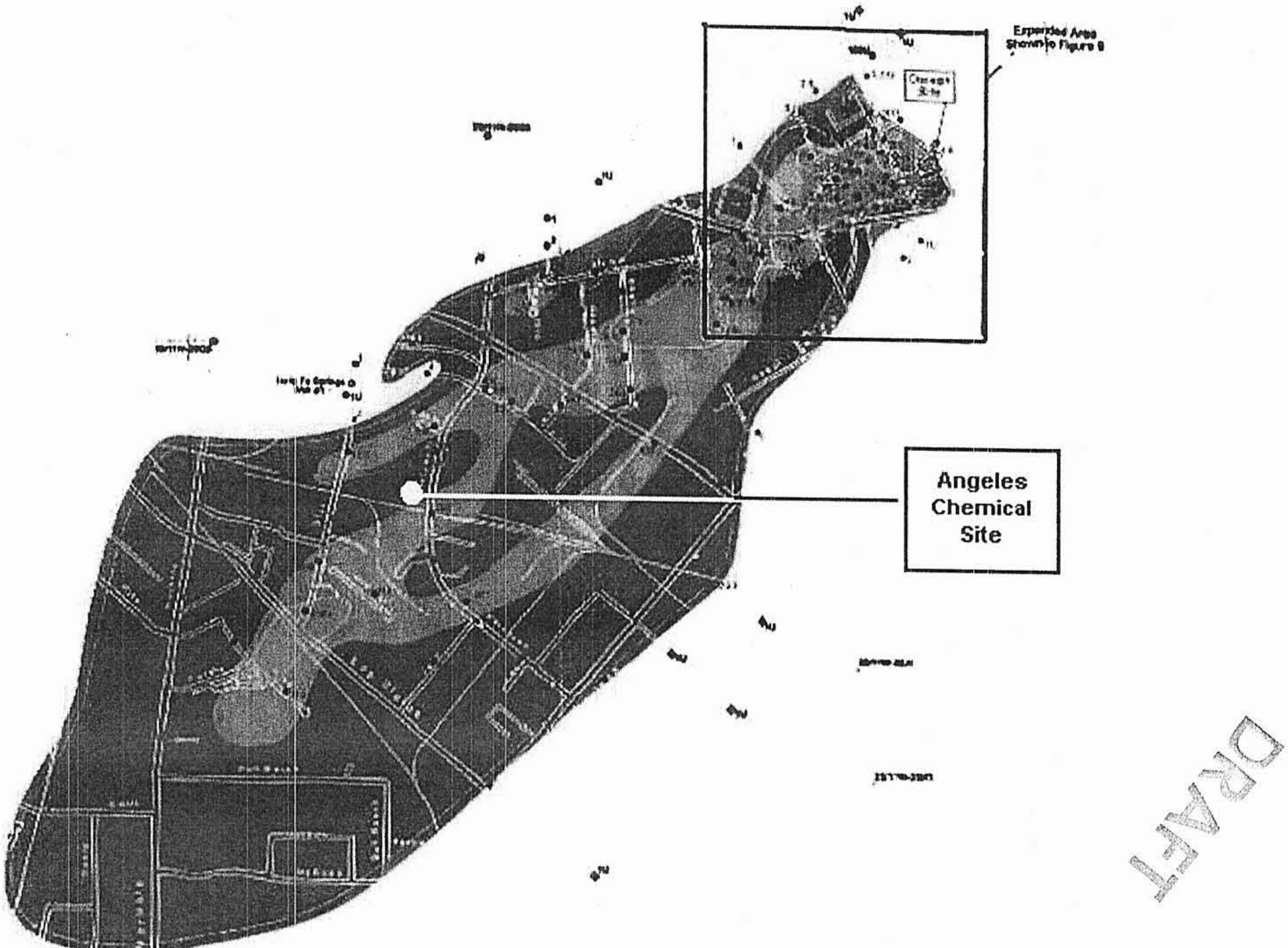
EXPLANATION

- Potential sources in the vicinity of former McKesson facility (no information)
- Sites in the vicinity of former McKesson facility with known solvent impacts to soil and/or groundwater
- Sites in the vicinity of former McKesson facility with known petroleum hydrocarbon impacts to soil and/or groundwater

Map shows only facilities that have been identified by Geomatrix to date, we make no represenation that this information is complete.

Source: Geomatrix

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	Figure 1-2 Neighboring Sites with Environmental Issues
	Site Characterization February 2004	



Note: PCE concentrations in µg/L.

0 600 1200
Scale in Feet

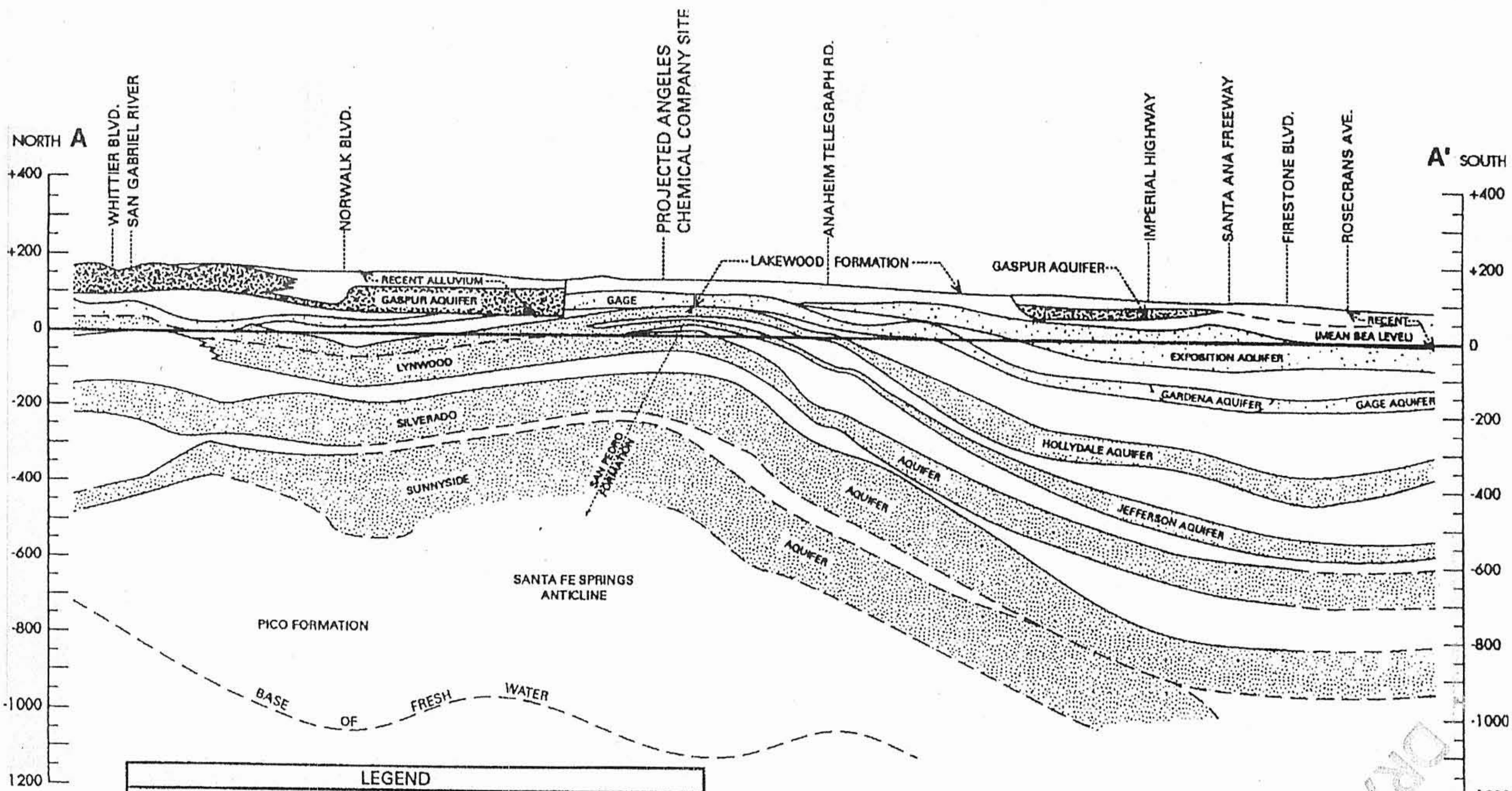
WESTON

- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Groundwater PCE Concentrations
Omega Superfund Site
Figure
7

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization February 2004	Figure 1-3 Map of Omega Groundwater Plume



LEGEND

- AQUICLUDES AND DEEPER UNDIFFERENTIATED FORMATIONS
- AQUIFERS IN RECENT ALLUVIUM (INCLUDES THE GASPUR AND BALLONA AQUIFERS)
- AQUIFERS IN LAKEWOOD FORMATION (INCLUDES THE ARTESIA, EXPOSITION, GAGE, AND GARDENA AQUIFERS)
- AQUIFERS IN SAN PEDRO FORMATION (INCLUDES THE HOLLYDALE, JEFFERSON, LYNWOOD, SILVERADO, AND SUNNYSIDE AQUIFERS)

0 4000

APPROX. HORIZONTAL SCALE IN FEET

REFERENCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES BULLETIN NO. 104, APPENDIX A, JUNE 1961 (CROSS SECTION N-N').

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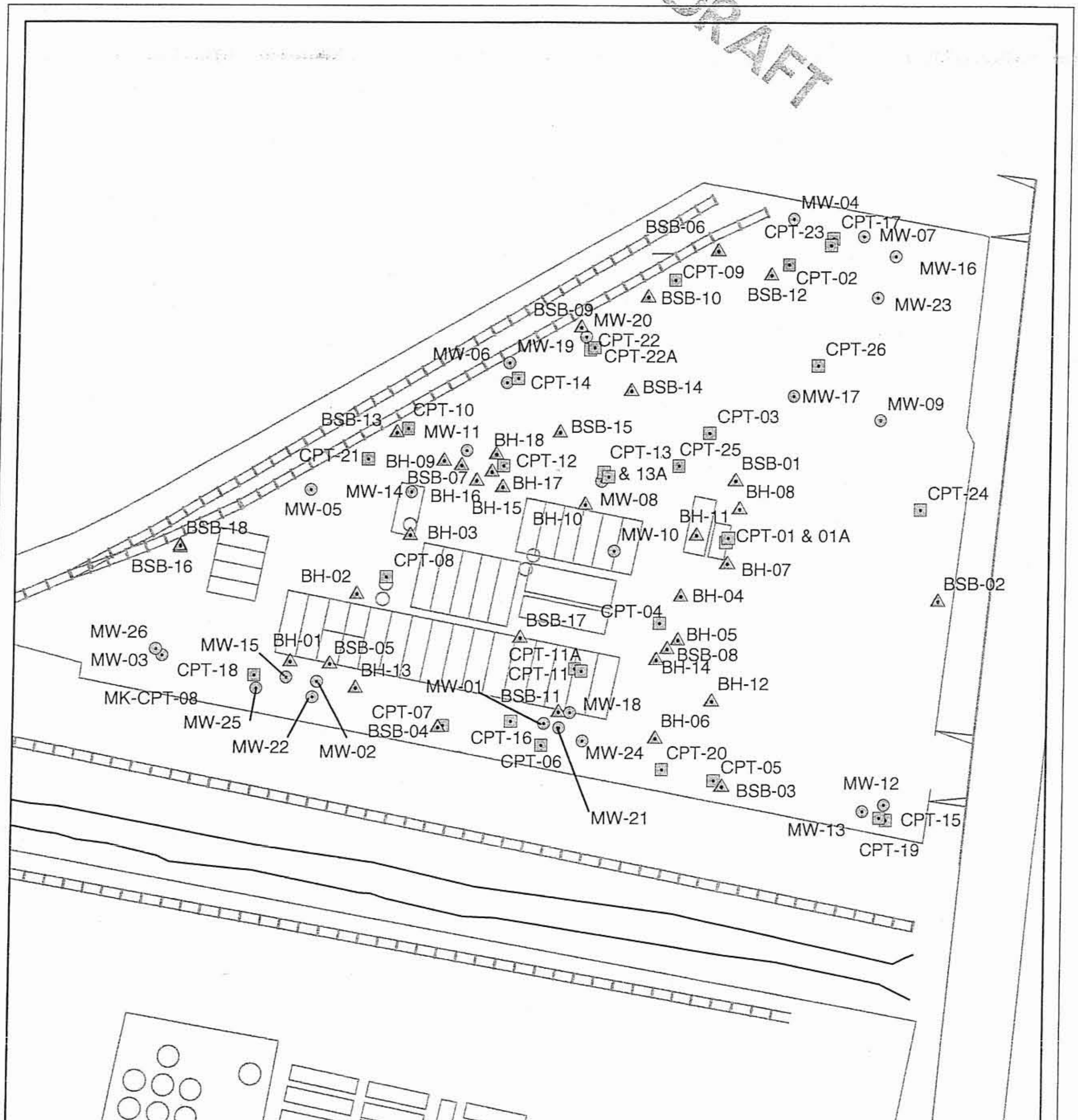
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization February 2004	Figure 1-4 Regional Hydrogeologic Cross Section



Explanation

Basemap Features

Unlined Drainage Channel

CPT

Monitoring Well

Soil Boring

N

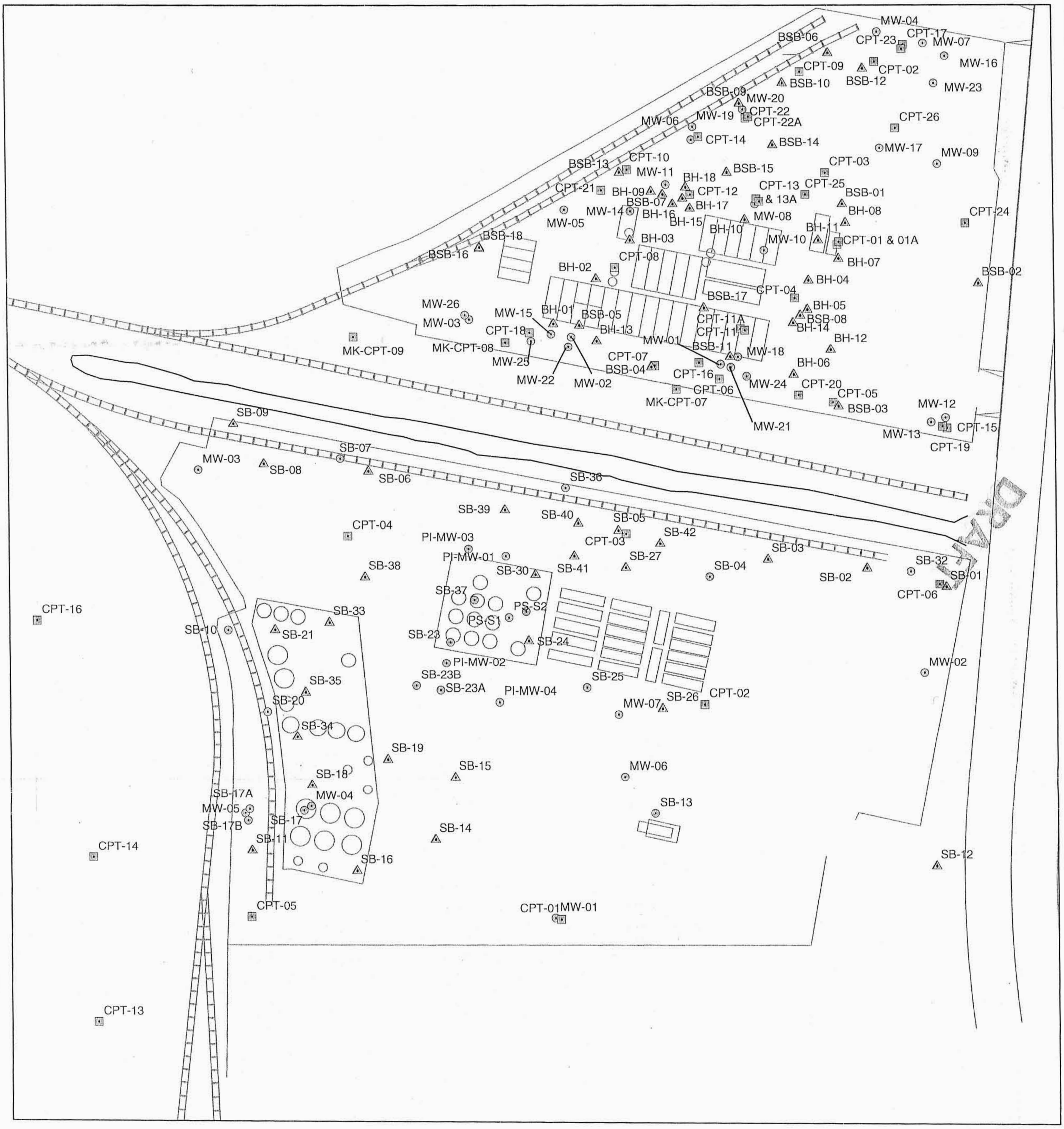
0 75 150 Feet

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 1-5
Map of Investigative Locations



Explanation

Basemap Features

Unlined Drainage Channel

CPT

Monitoring Well

Soil Boring

N

0 50 100 200 300 Feet

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
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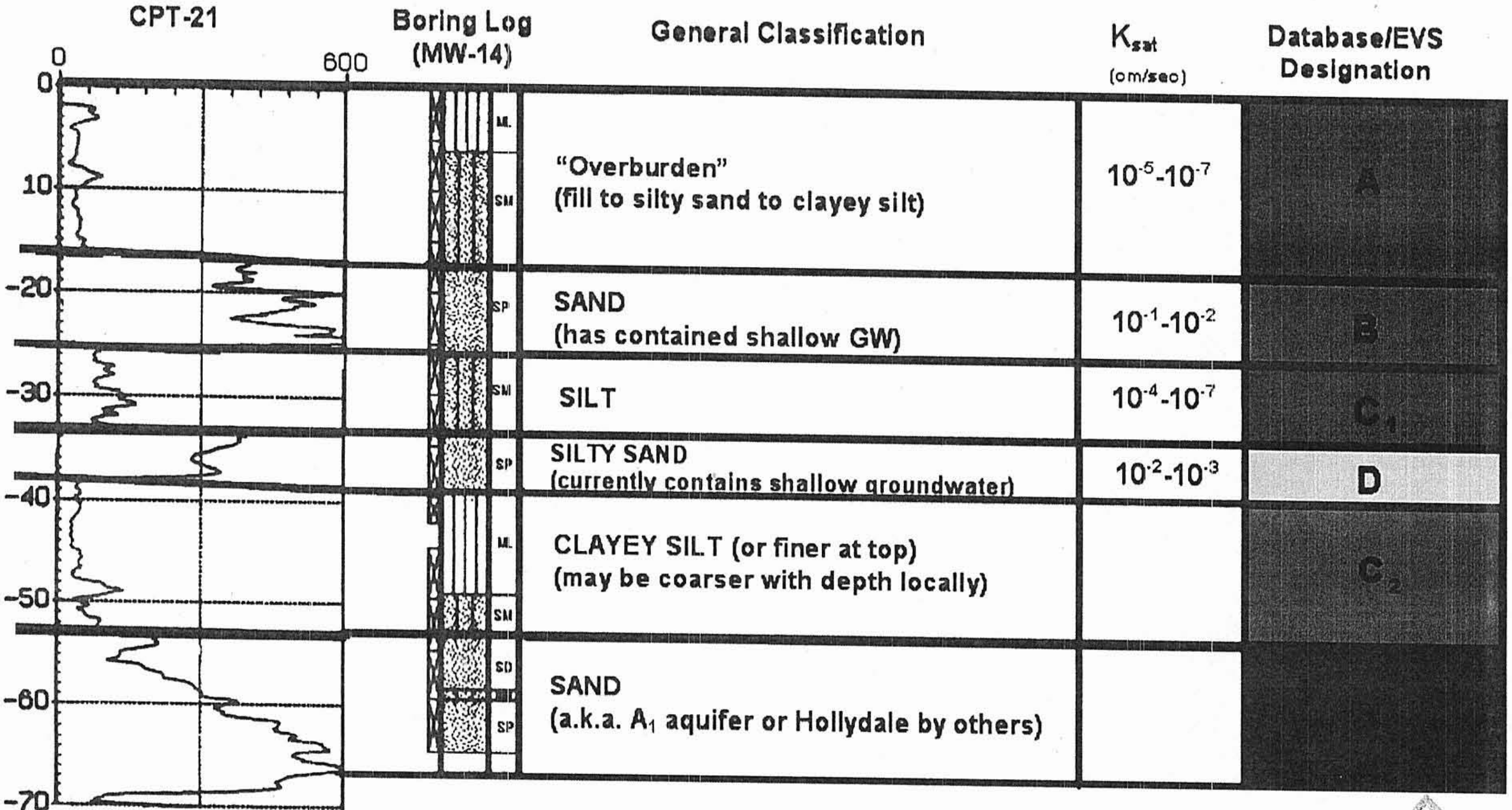
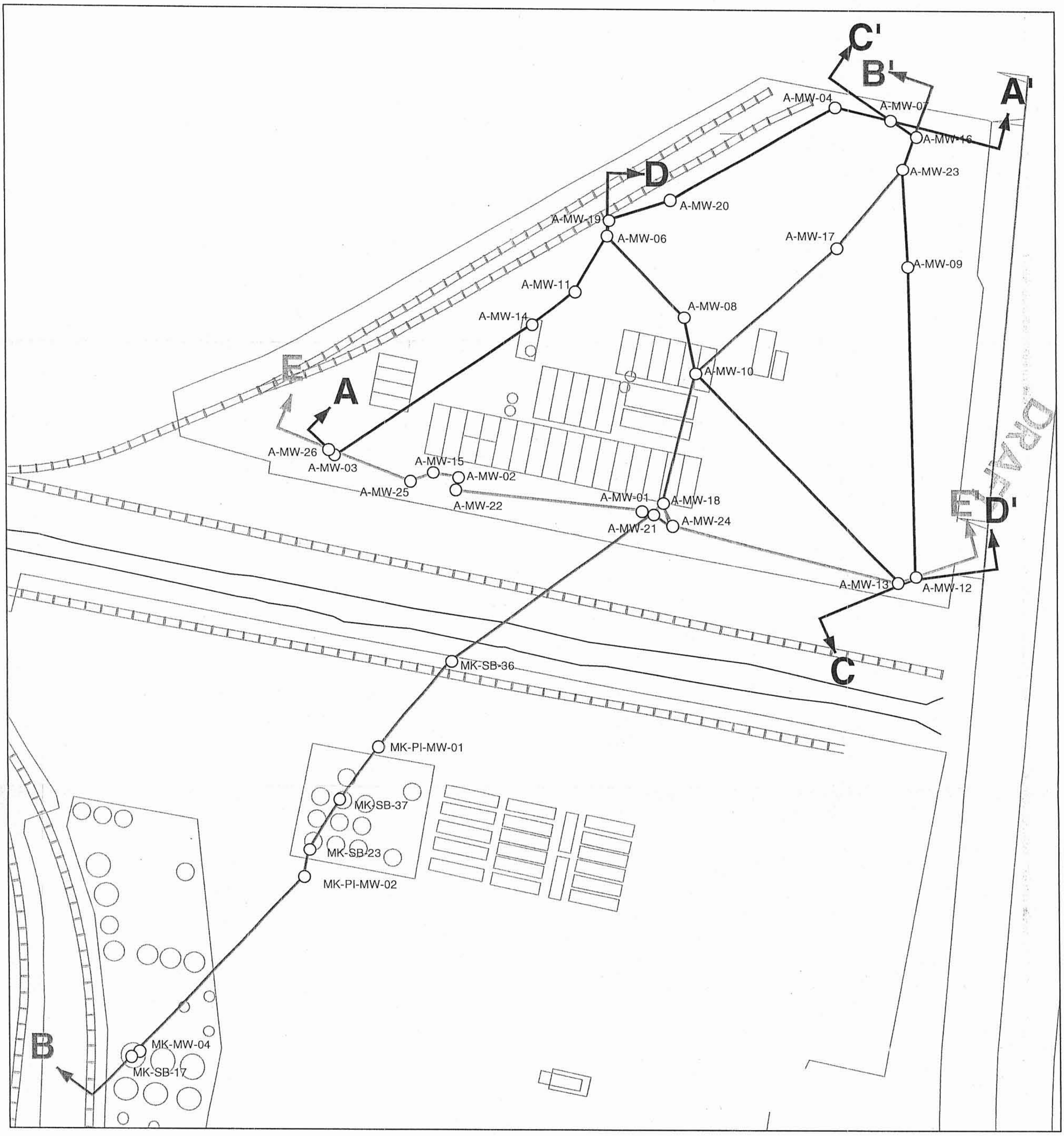
Figure 2-1
Map of Investigative Locations Including McKesson Site



Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	Figure 2-2
	Site Characterization February 2004	Hydrogeologic Classification Matrix



Explanation

- Monitoring Well
- Basemap Features
- Unlined Drainage Channel

Cross-Section Lines

A — A'

B — B'

C — C'

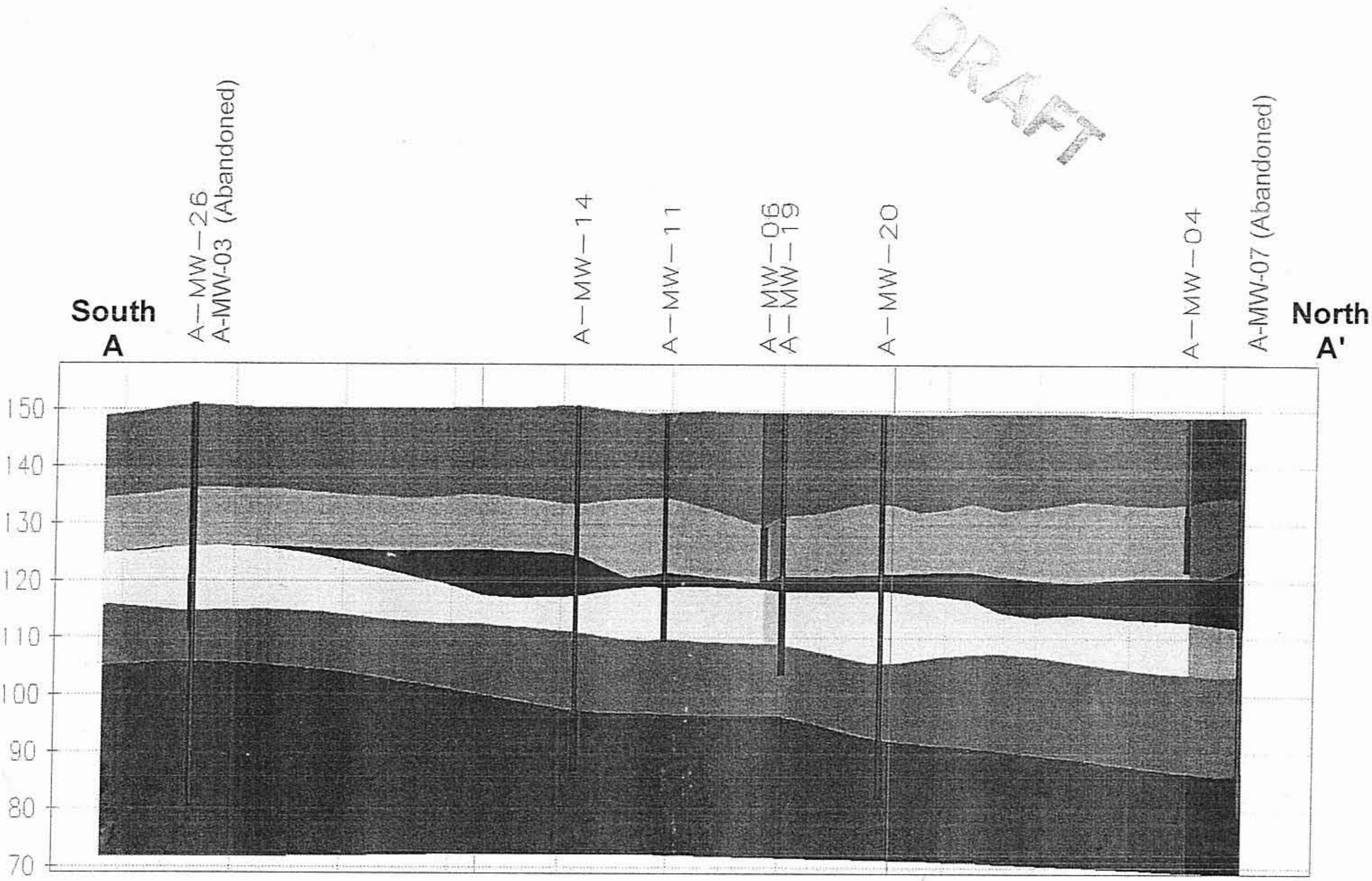
D — D'

E — E'

N

0 30 60 120 180 Feet

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 2-3** **Map Showing Lines of Cross Section**



Explanation

Hydrogeologic Units

- Unit A-Fill to silty sand to clayey silt
- Unit B-Sand
- Unit C1-Silt
- Unit D-Silty sand
- Unit C2-Clayey silt
- Unit E-Sand

Well and screen interval

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Angeles Chemical Company Site
Santa Fe Springs, CA

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Figure 2-4
Cross Section A-A'

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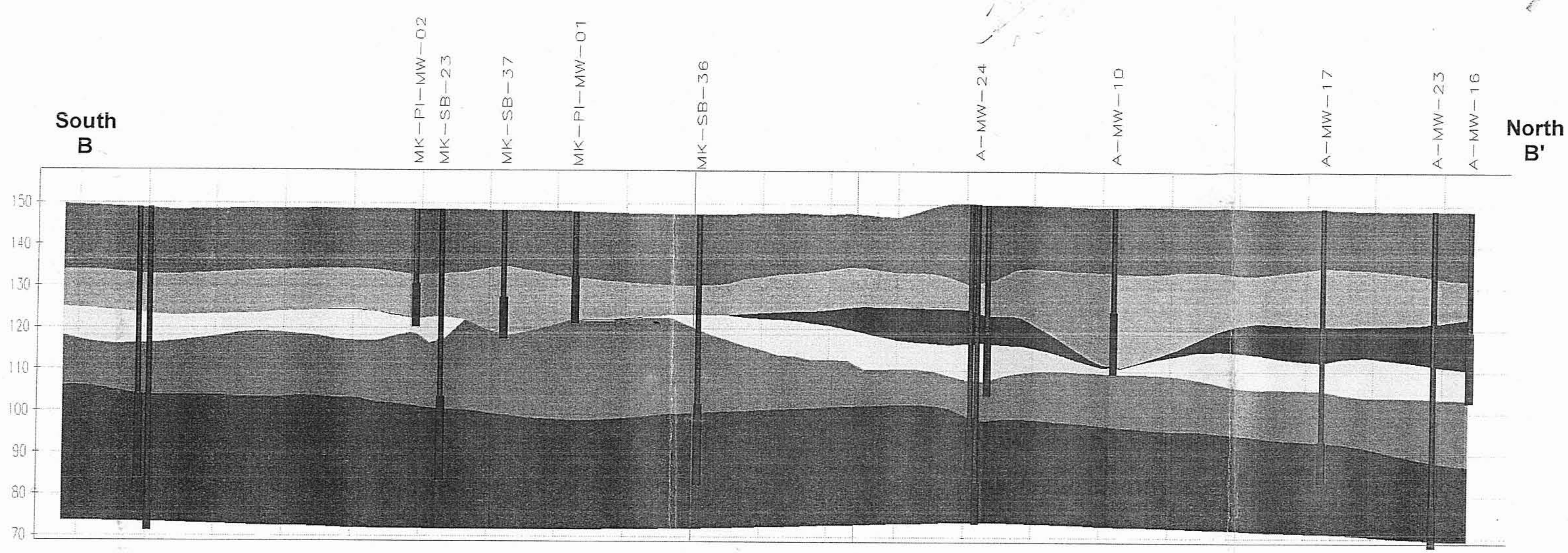


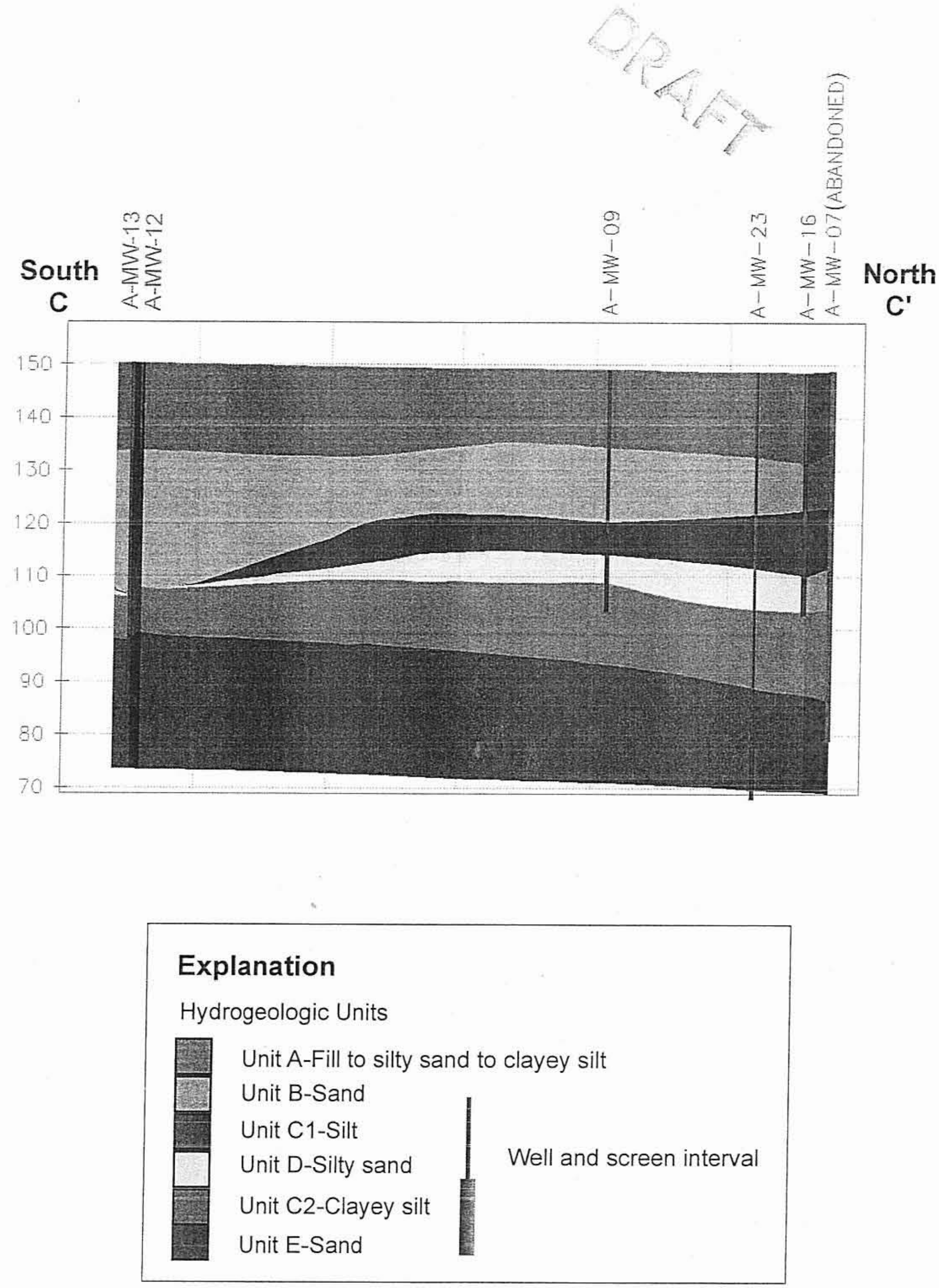
Explanation

Hydrogeologic Units

- Unit A-Fill to silty sand to clayey silt
- Unit B-Sand
- Unit C1-Silt
- Unit D-Silty sand
- Unit C2-Clayey silt
- Unit E-Sand

Well and screen interval

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 2-5** **Cross Section B-B'**



Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

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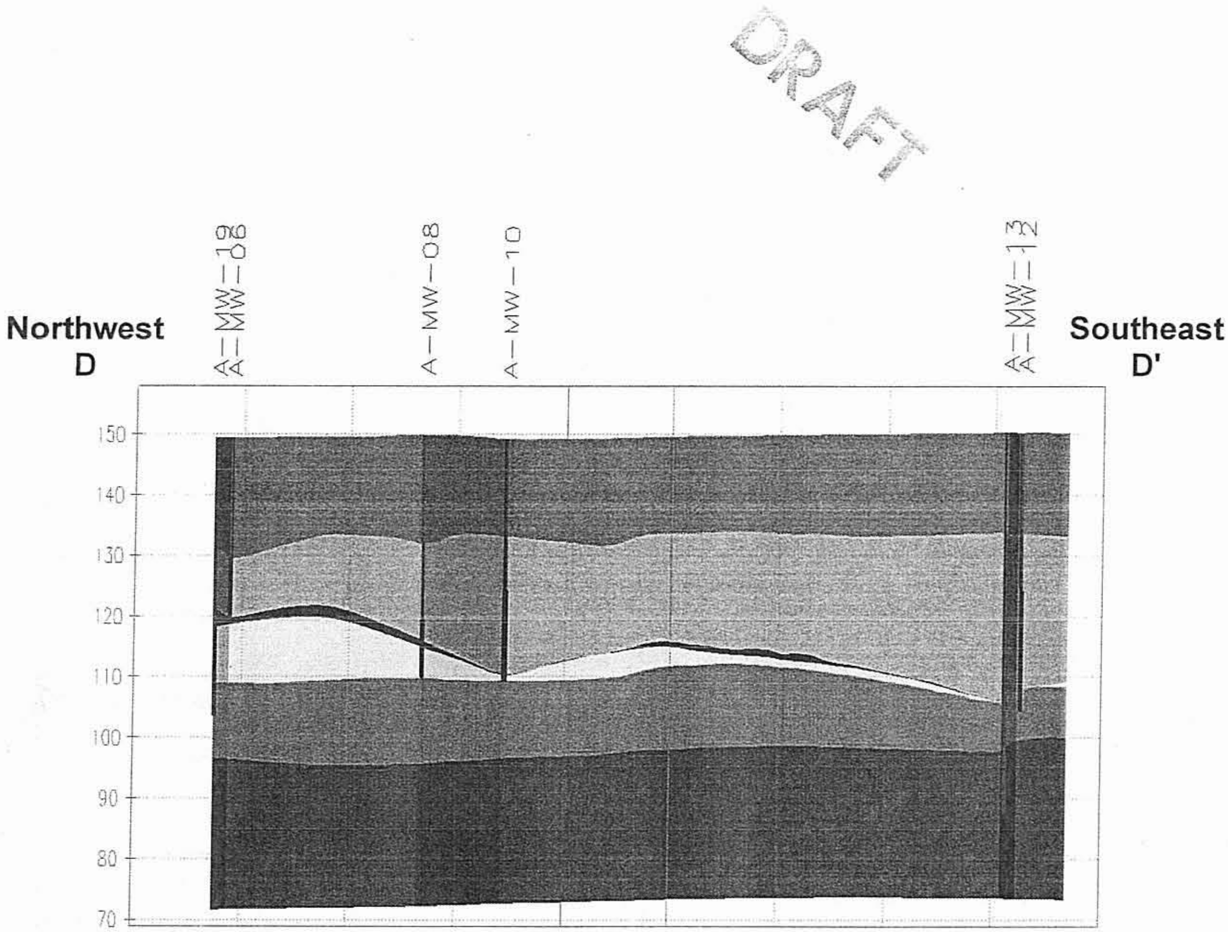
February 2004

Figure 2-6
Cross Section C-C'



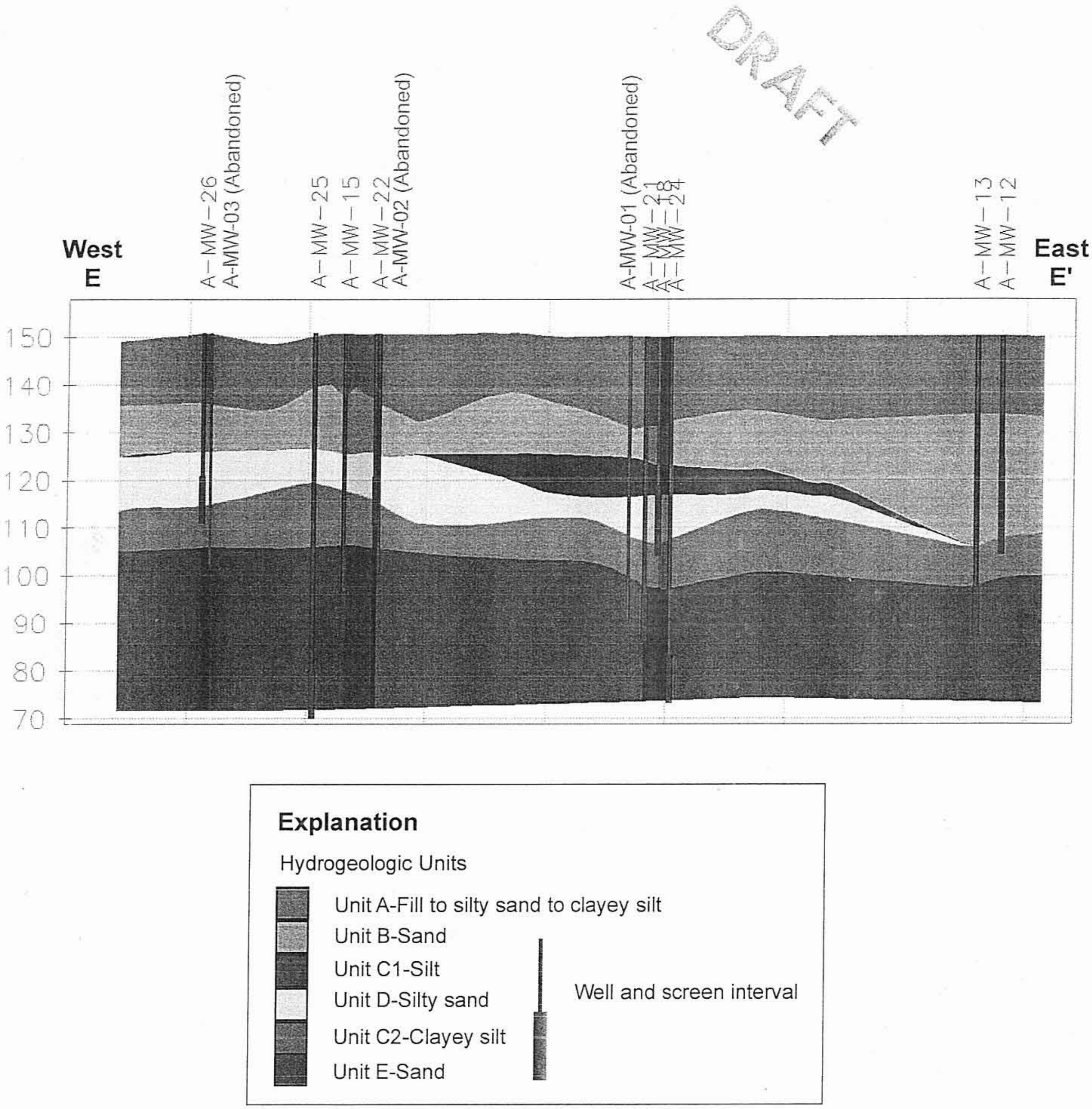
Explanation

Hydrogeologic Units

- Unit A-Fill to silty sand to clayey silt
- Unit B-Sand
- Unit C1-Silt
- Unit D-Silty sand
- Unit C2-Clayey silt
- Unit E-Sand

Well and screen interval

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 2-7** **Cross Section D-D'**

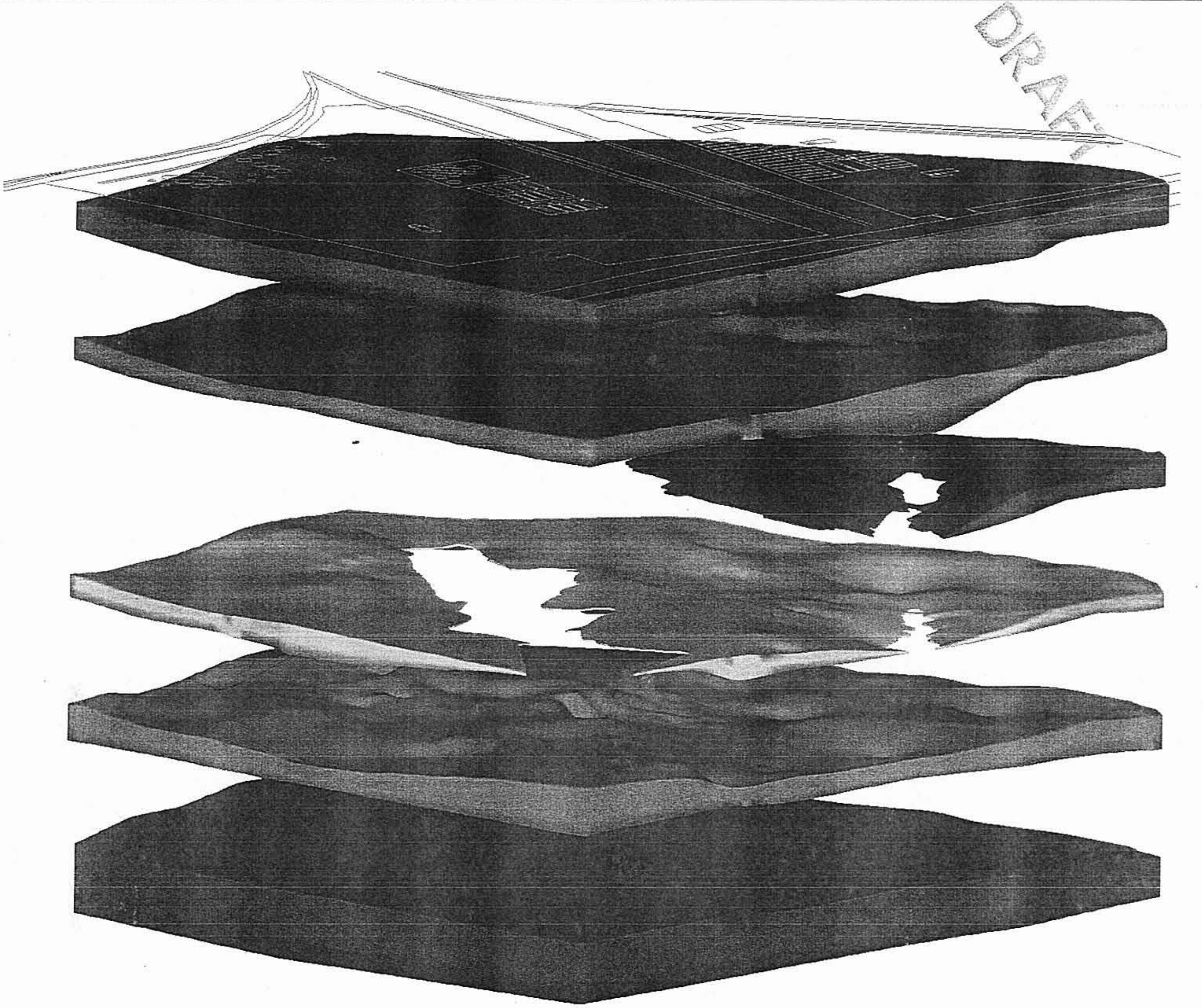


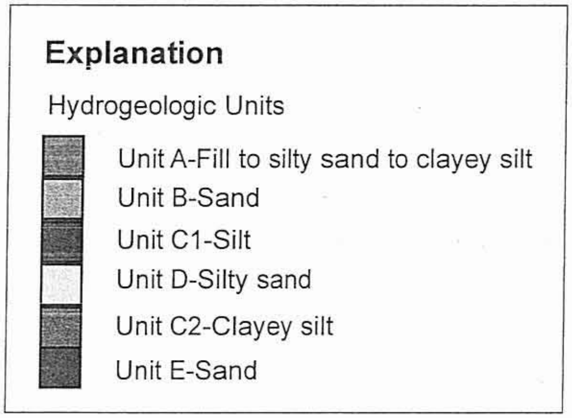
Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 2-8
Cross Section E-E'



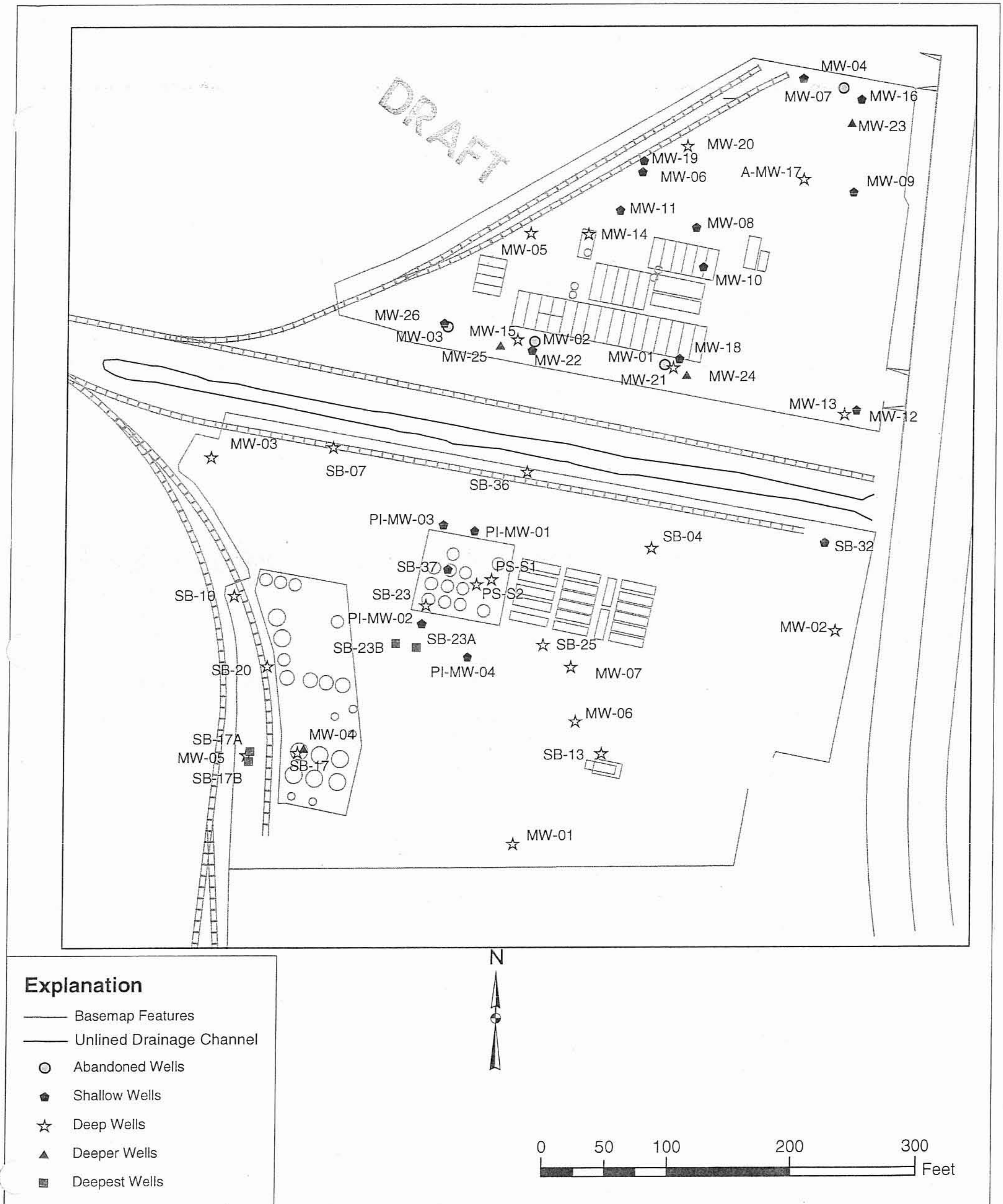


Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 2-9
Exploded 3-D Visualization of Hydrogeologic Units

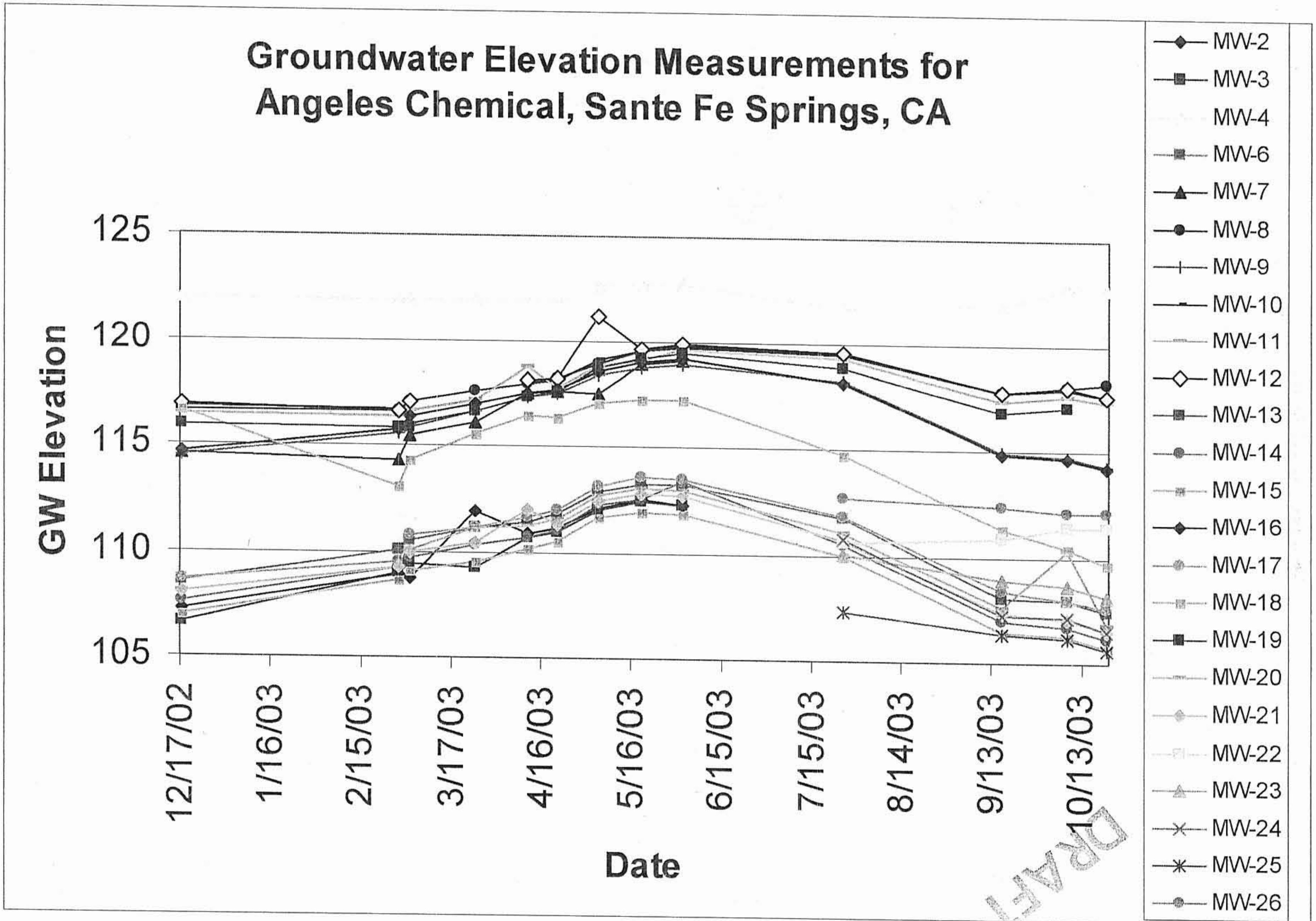


Shaw® Shaw E & I

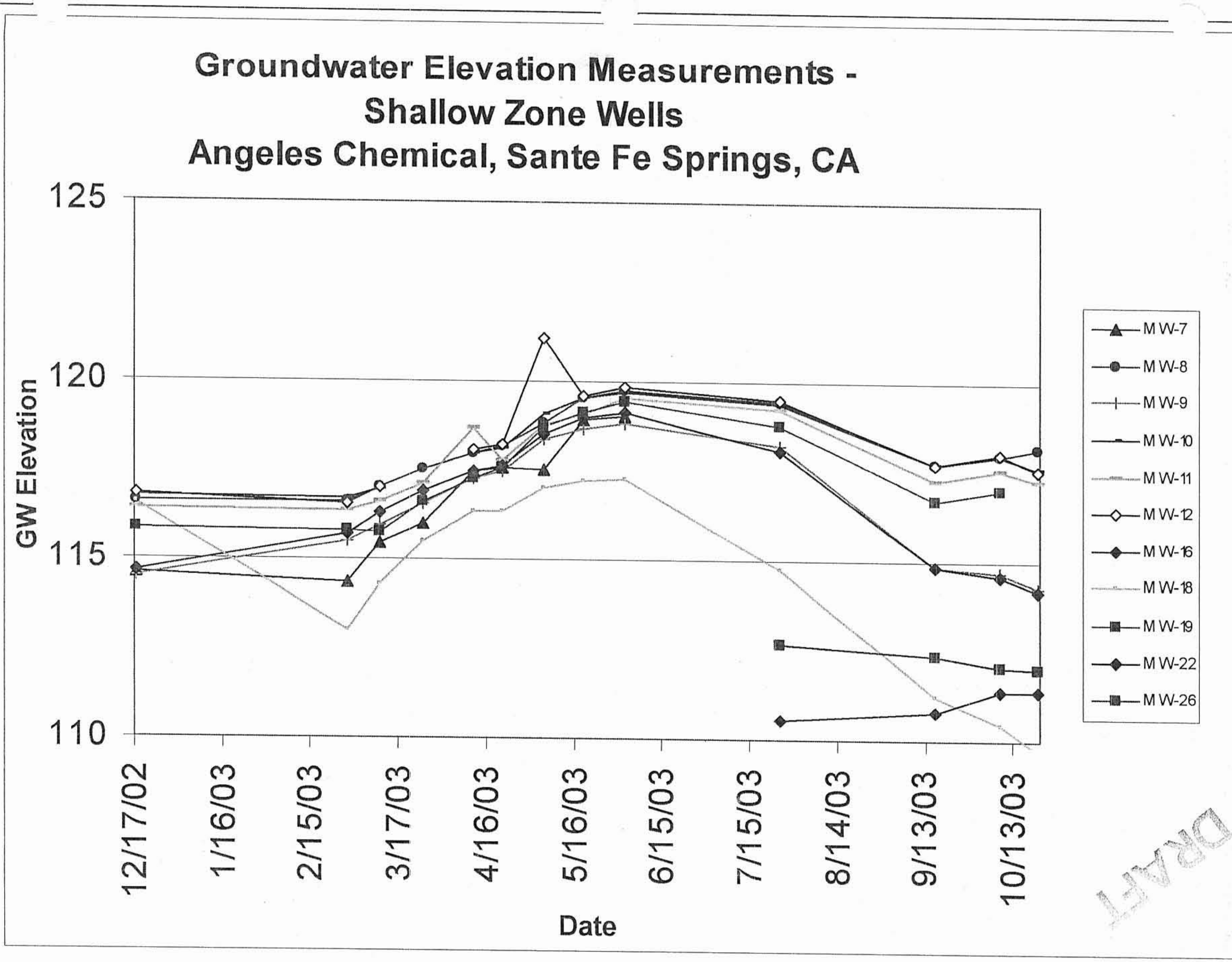
Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

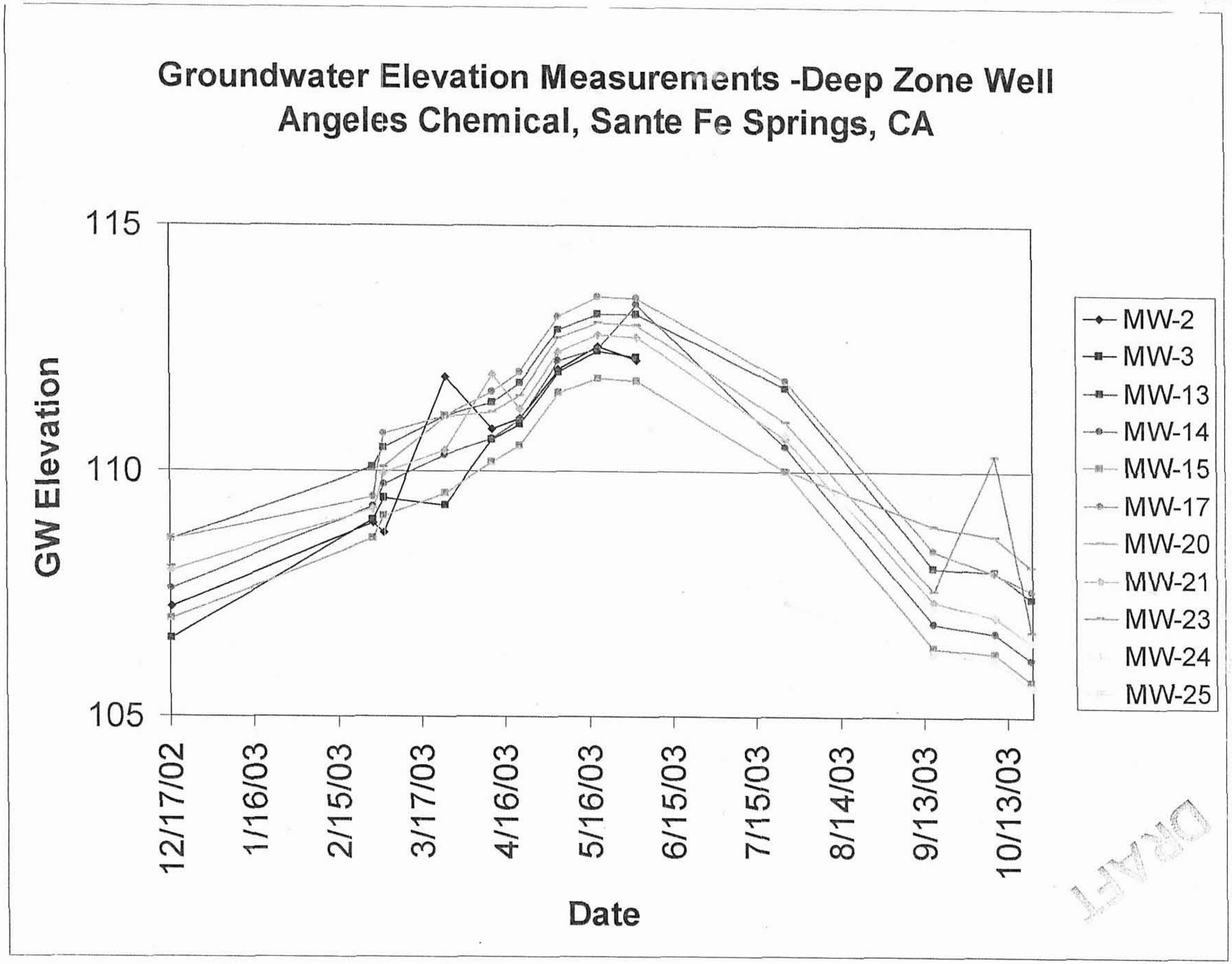
Figure 2-10
Site Map Showing Groundwater Monitoring Wells



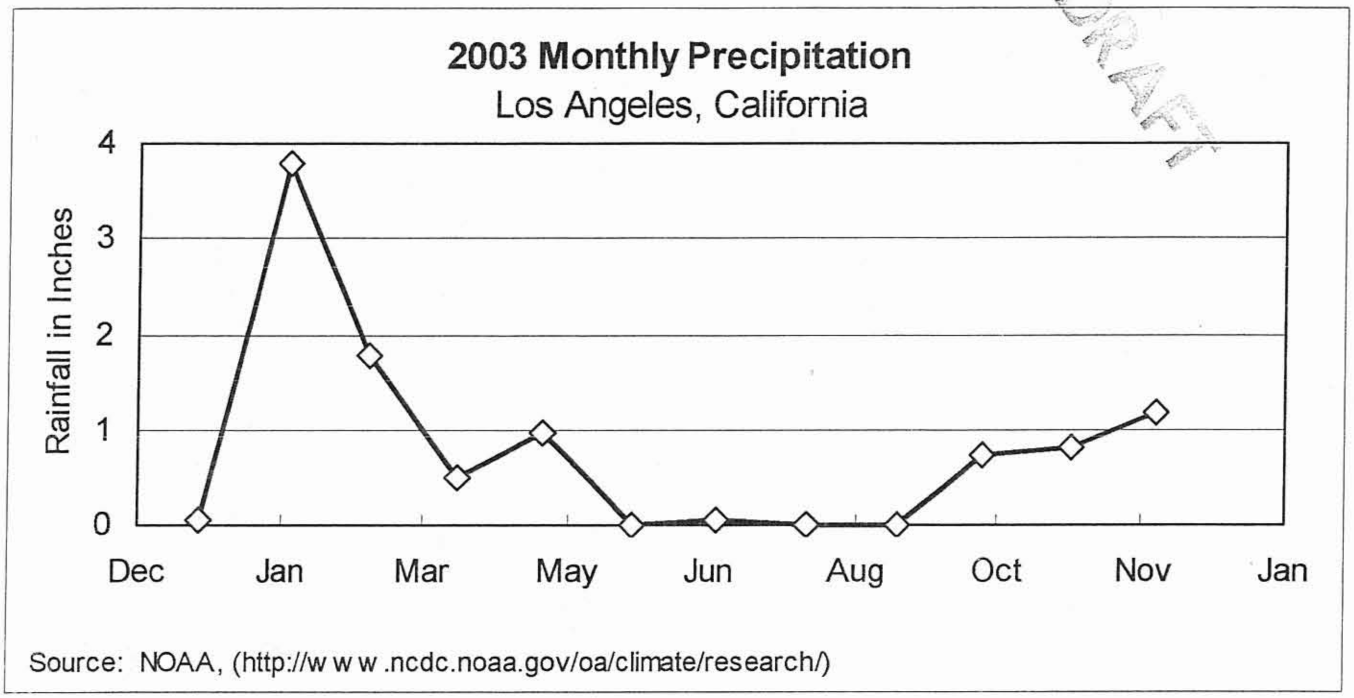
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization February 2004	Figure 2-11 Monitoring Well Hydrographics

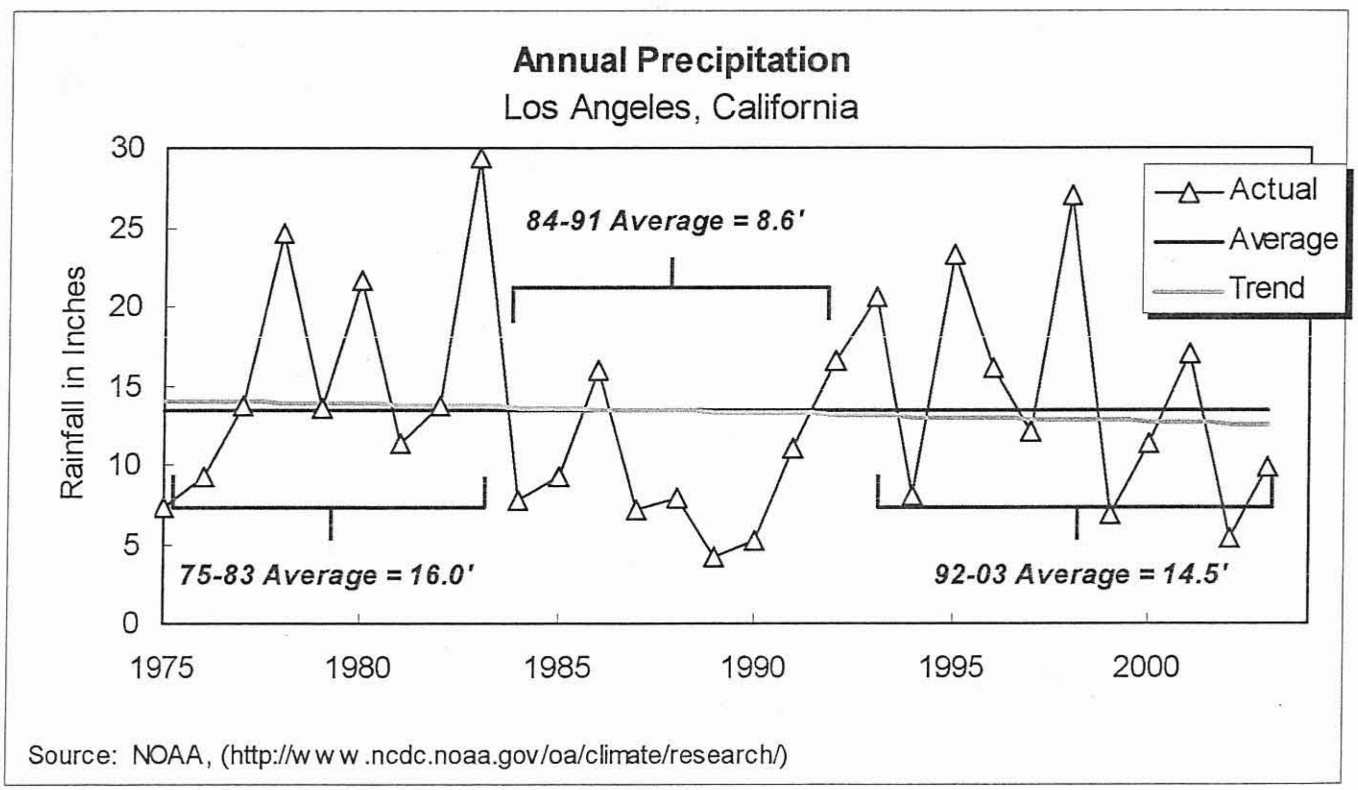


Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	Figure 2-12
	Site Characterization February 2004	Shallow Monitoring Well Hydrographs



Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization February 2004	Figure 2-13 Deep Monitoring Well Hydrographs





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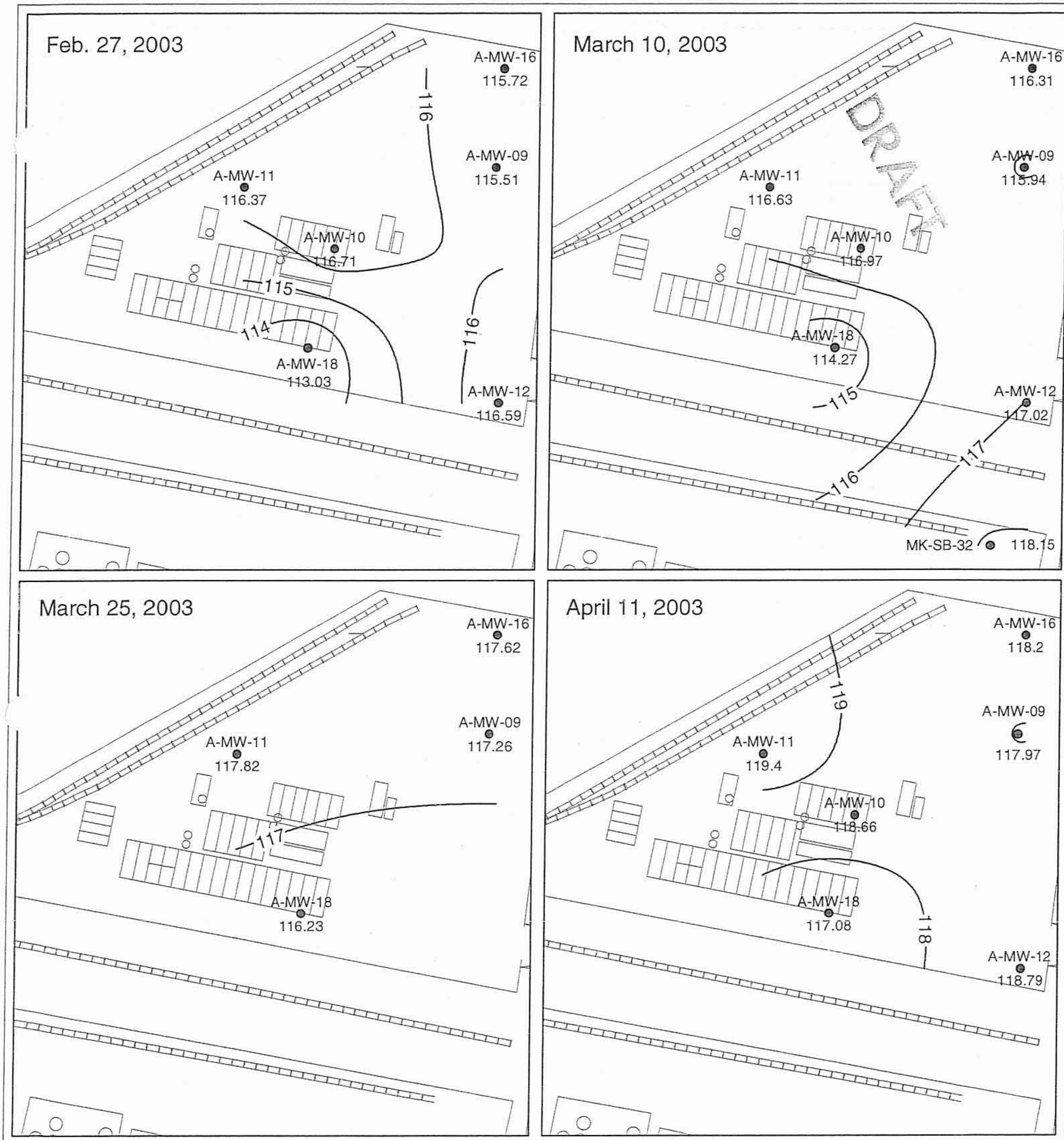
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	Figure 2-14
	Site Characterization February 2004	Precipitation Data



Explanation

- Well and water level
- Interpreted line of equal elevation

N

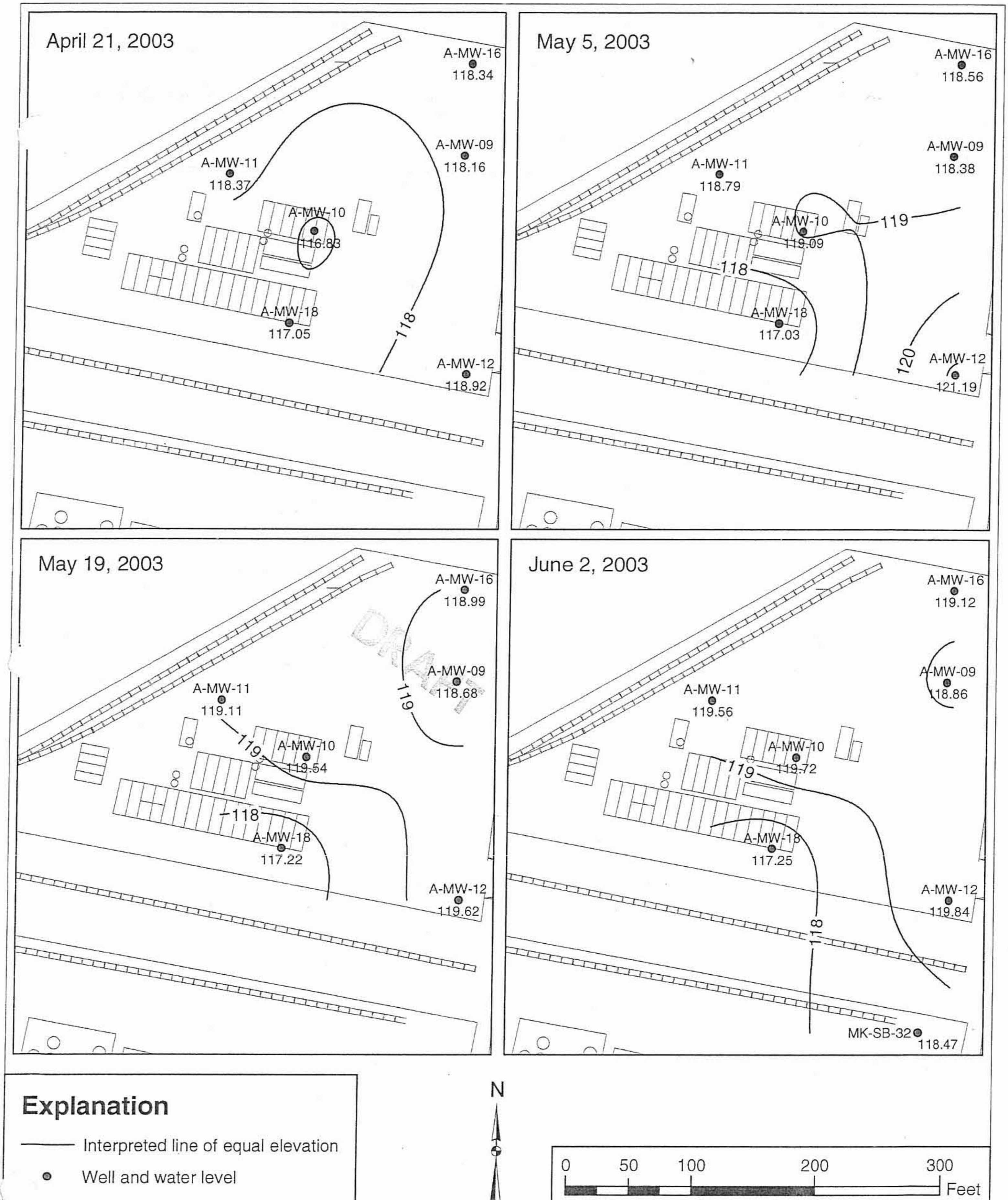
0 50 100 200 300 Feet

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 2-15
Shallow Groundwater Contours
February. March, and April 2003

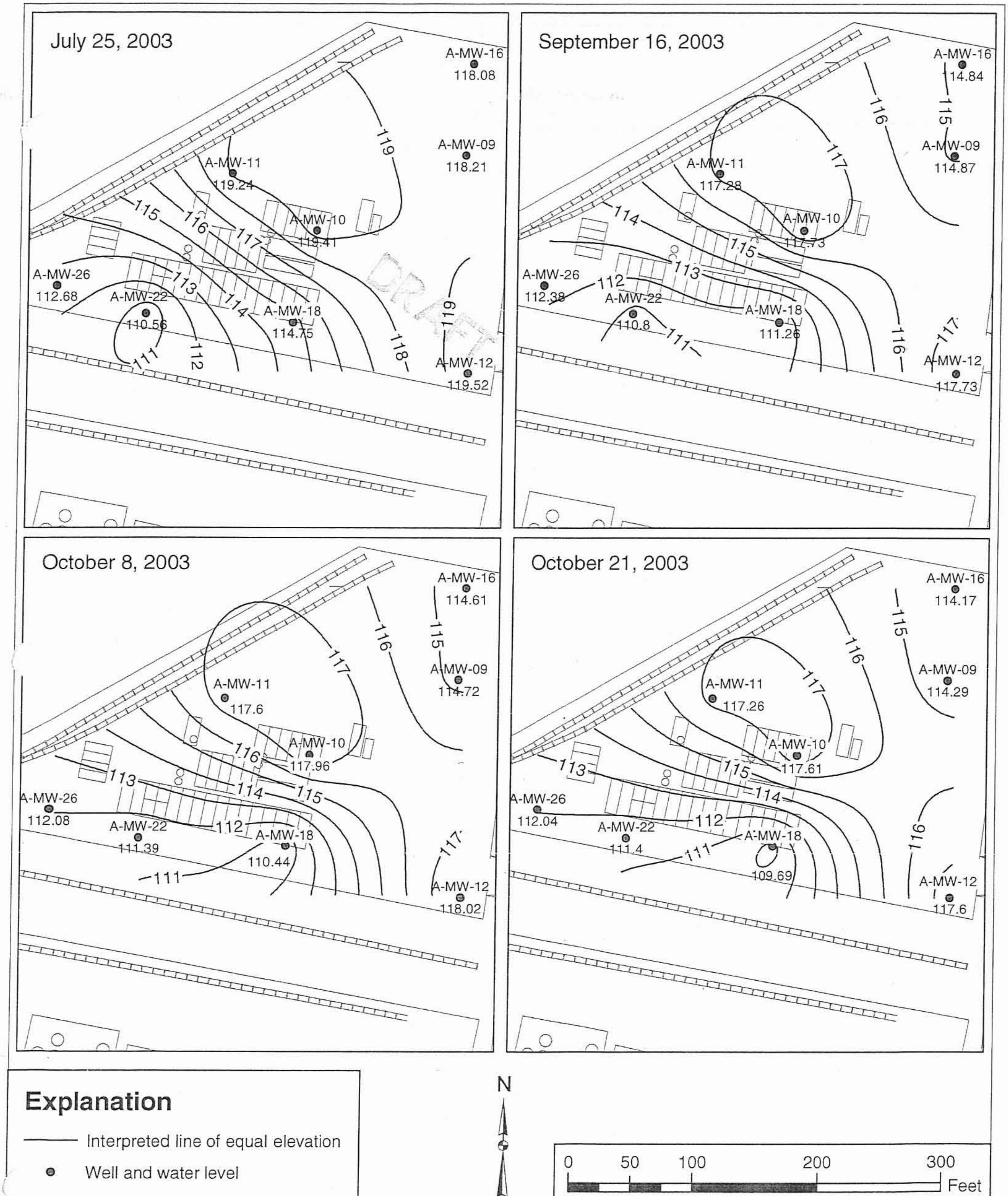


Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 2-16
Shallow Groundwater Contours
April, May, and June 2003

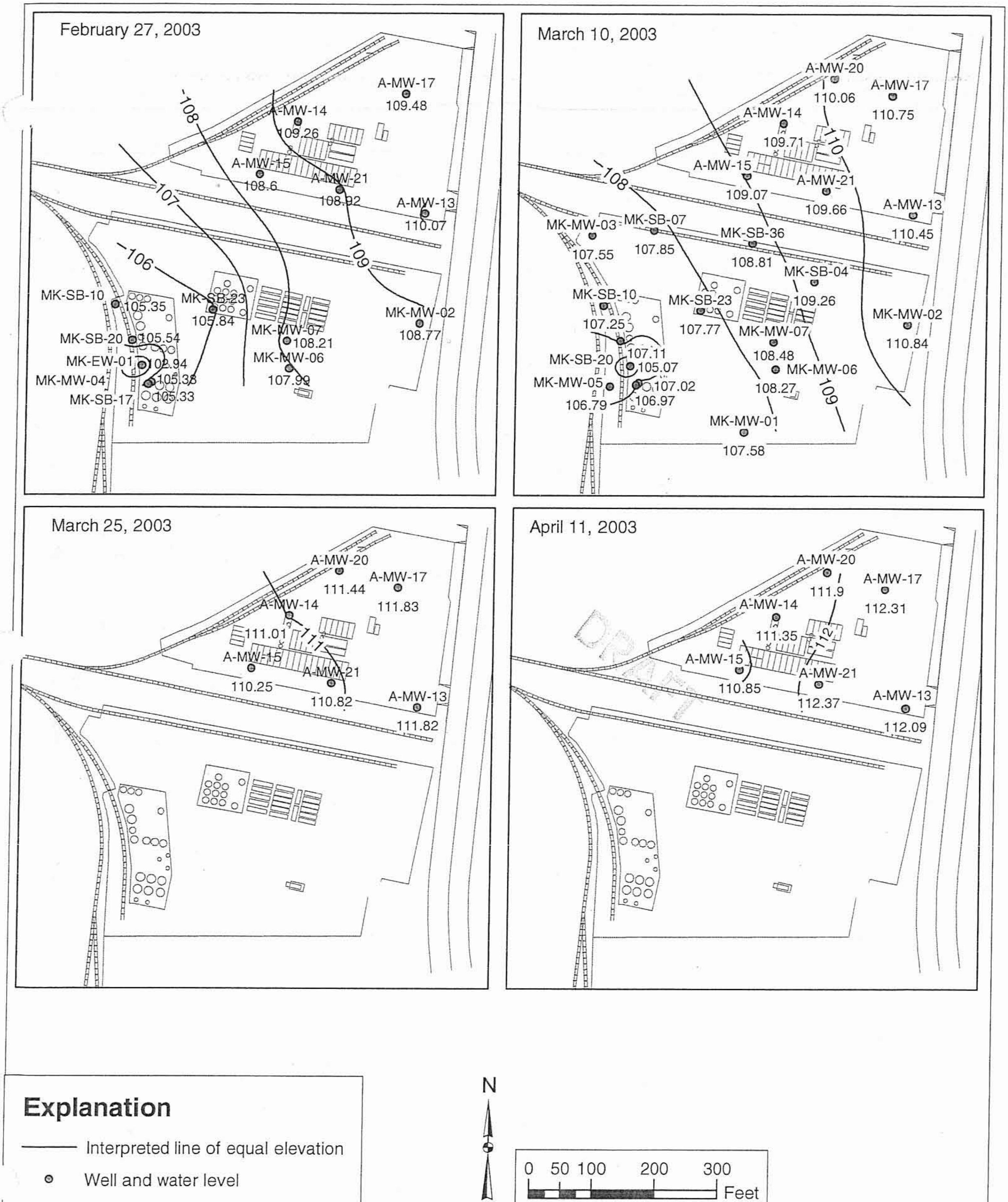


Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 2-17
Shallow Groundwater Contours
July, Spetember, and October 2003



Shaw® Shaw E & I

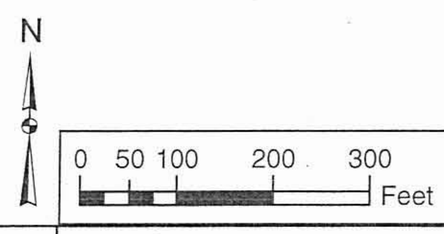
Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

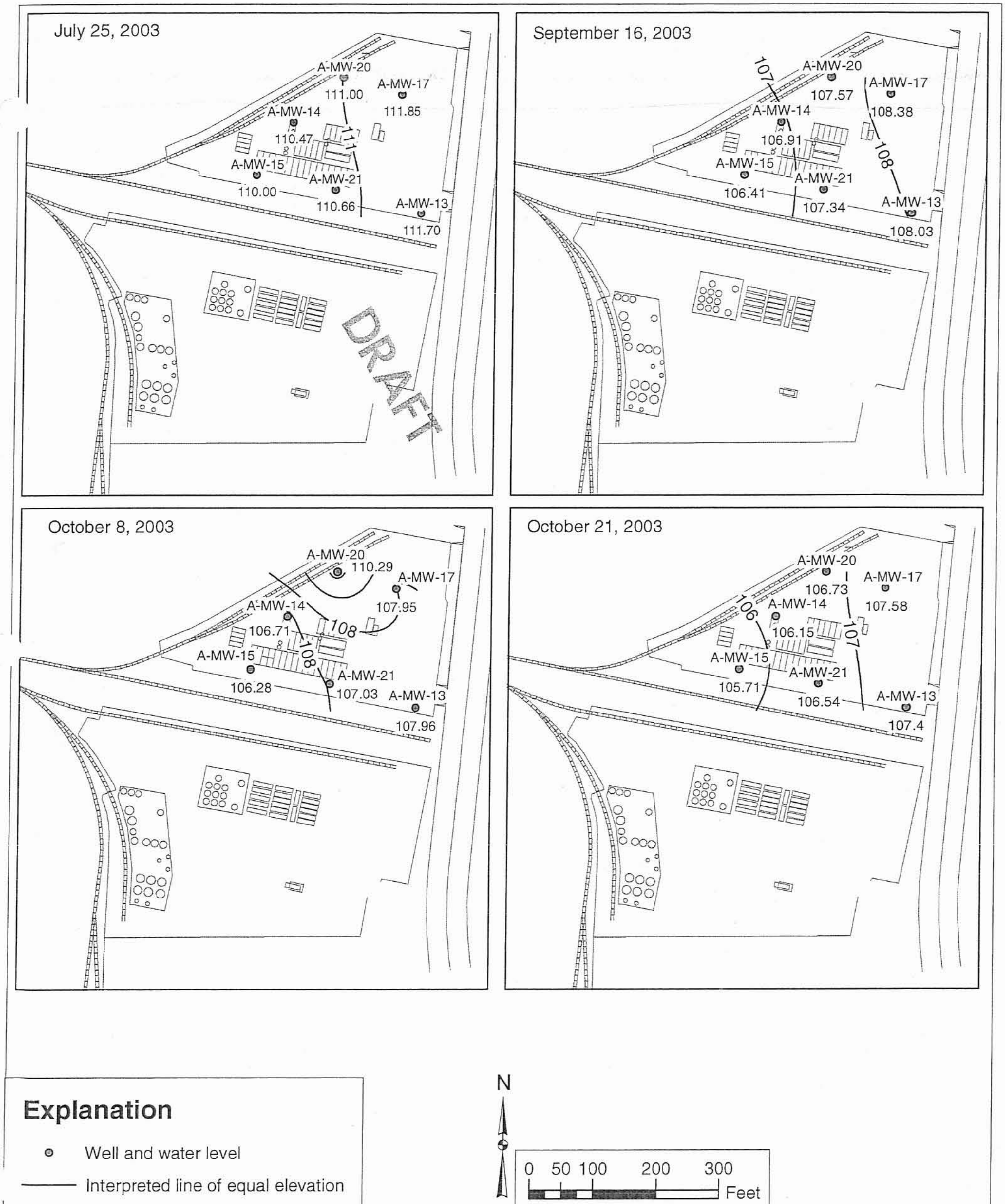
Figure 2-18
Deep Groundwater Contours
February. March, and April 2003

Explanation

- Well and water level
- Interpreted line of equal elevation



Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 2-19** **Deep Groundwater Contours** **April, May, and June 2003**

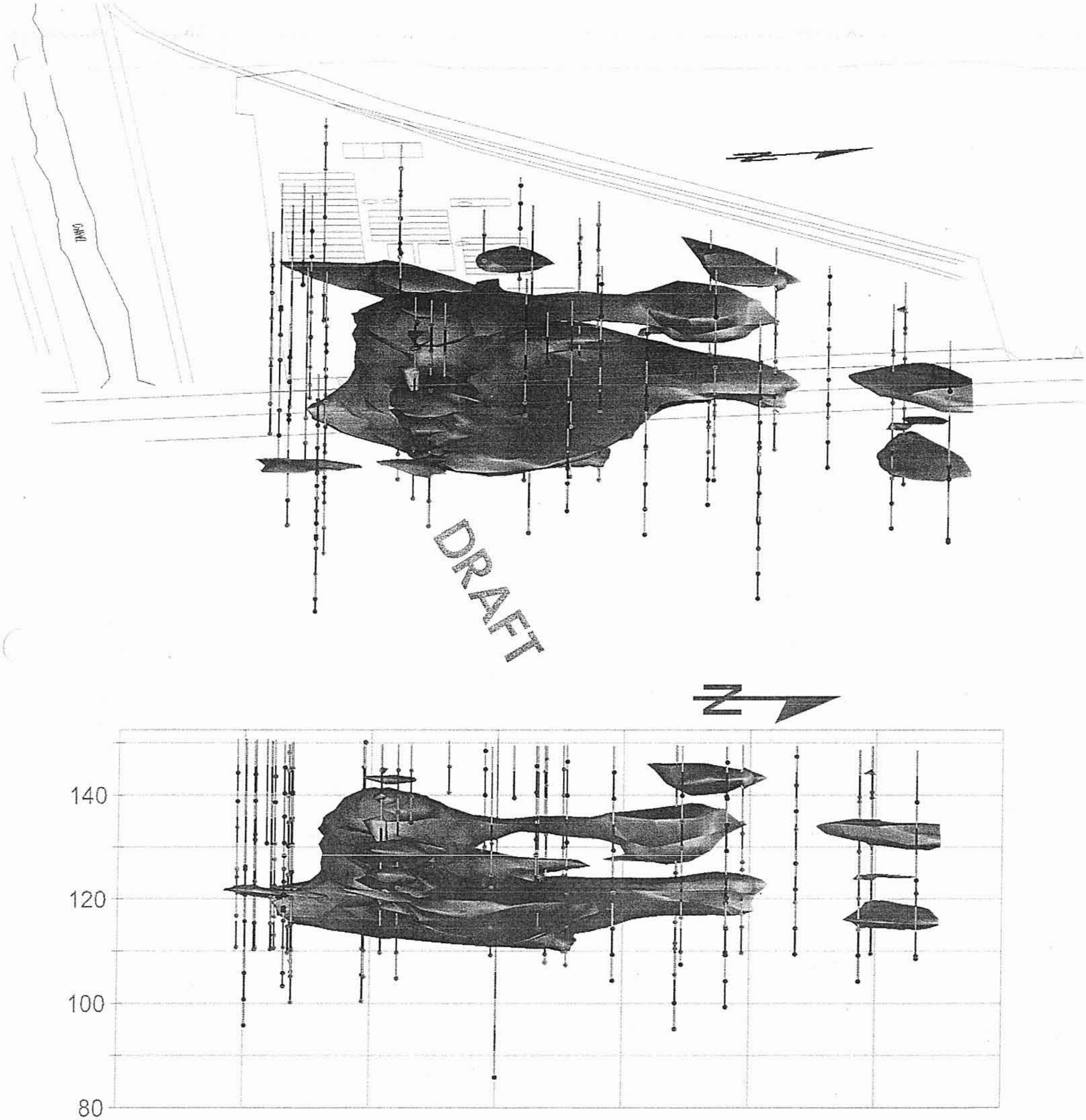


Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

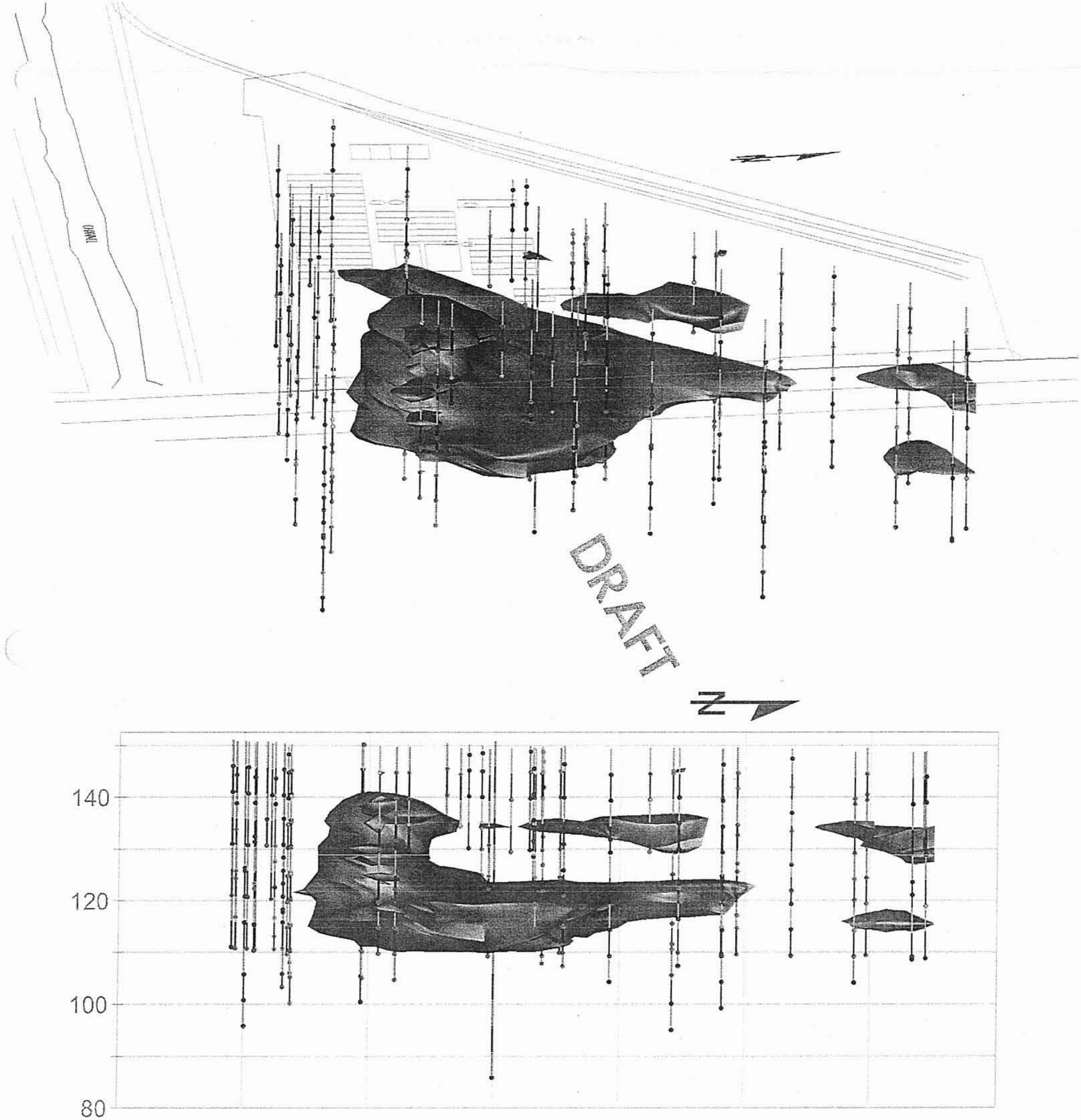
Site Characterization Report
February 2004

Figure 2-20
Deep Groundwater Contours
July, September, and October 2003



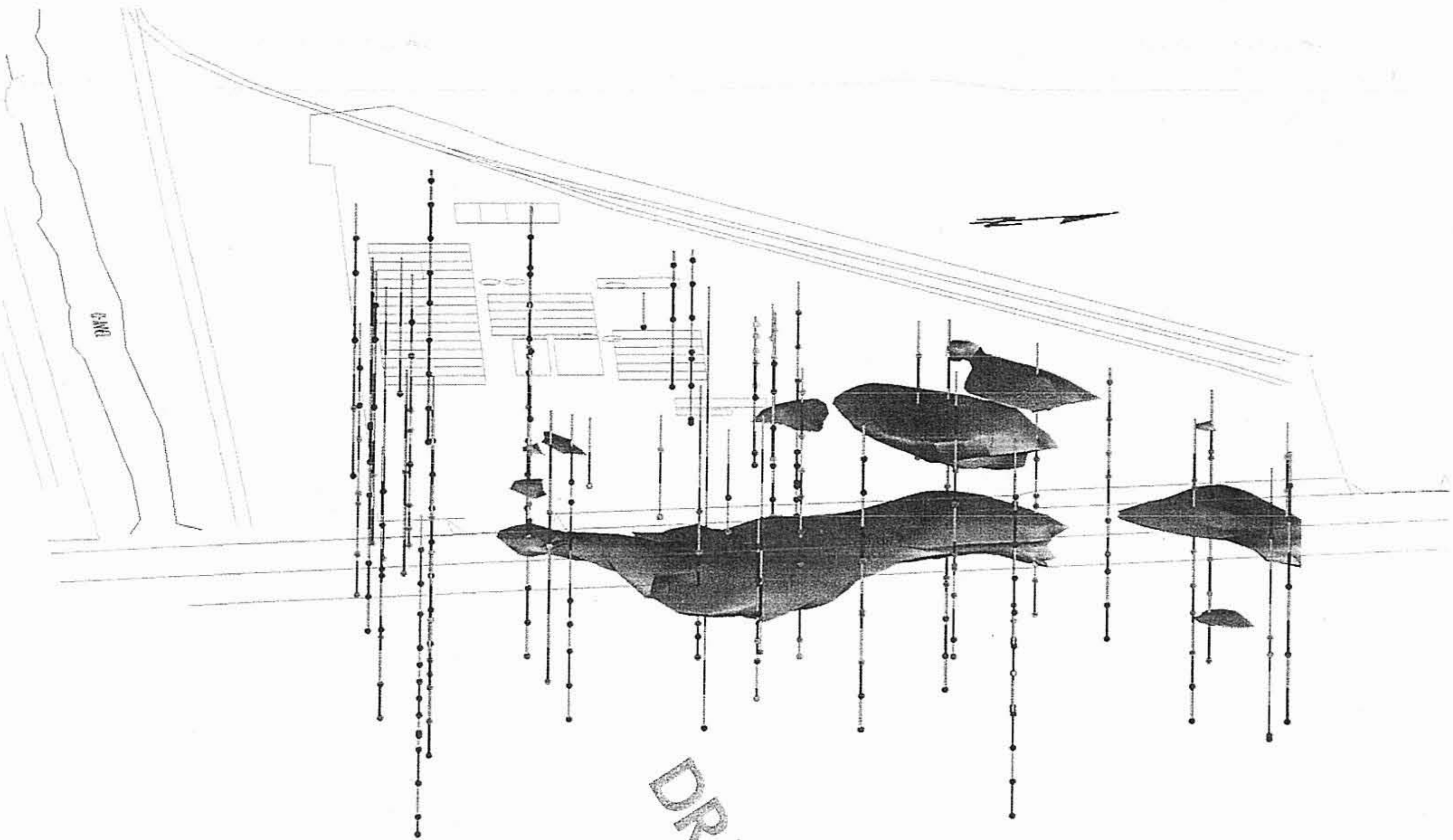
Data from upper 2 ft have been omitted to improve visibility of deeper soil.
Omitted data are plotted and color-coded
on the boring representations and are provided in the tables.

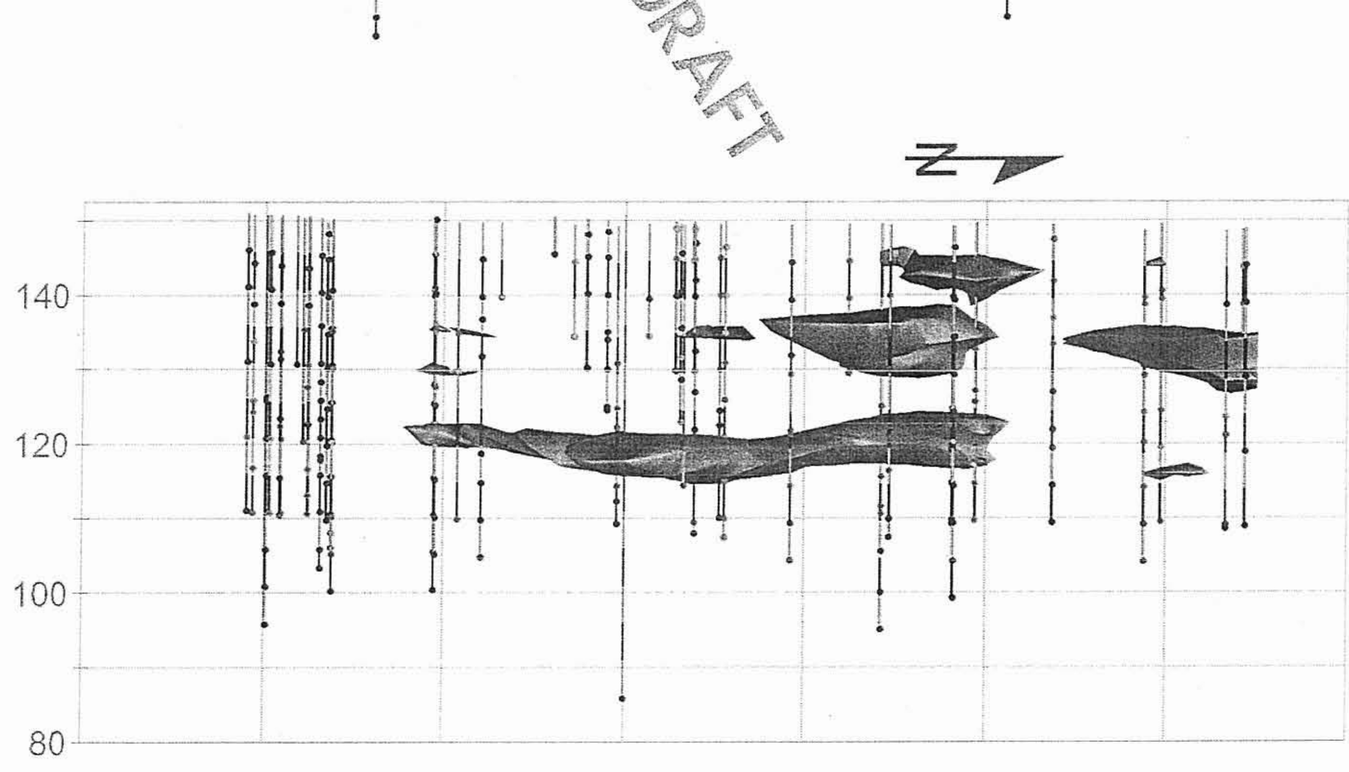
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Expert's Report February 2004	**Figure 3-1** **Total Xylenes in Soil (>10 mg/kg)**



Data from upper 2 ft have been omitted to improve visibility of deeper soil.
Omitted data are plotted and color-coded
on the boring representations and are provided in the tables.

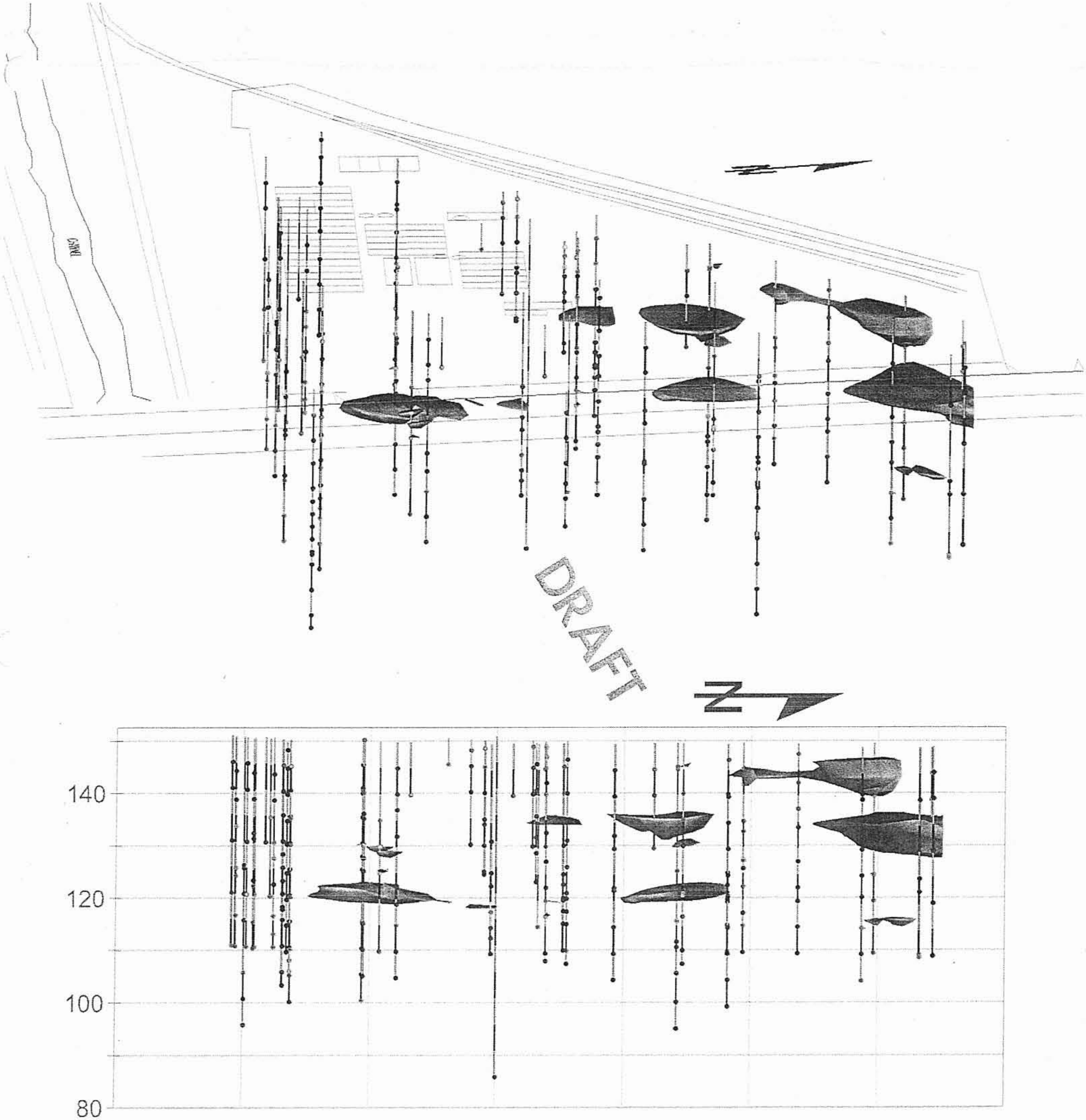
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 3-2** **Toluene in Soil (>10 mg/kg)**
	Expert's Report February 2004	





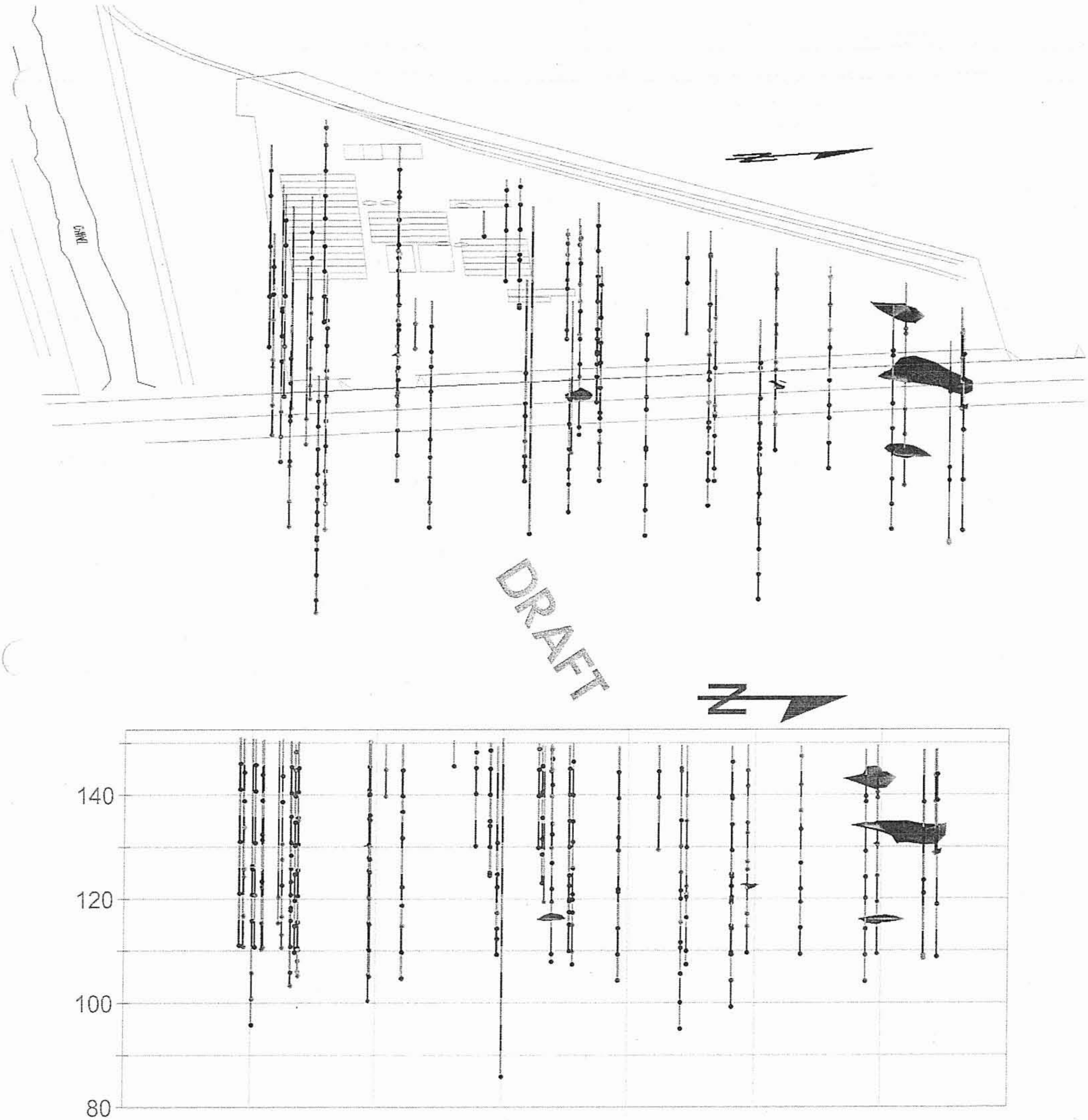
Data from upper 2 ft have been omitted to improve visibility of deeper soil. Omitted data are plotted and color-coded on the boring representations and are provided in the tables.

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Expert's Report February 2004	**Figure 3-3** **1,1,1-TCA in Soil (>10 mg/kg)**



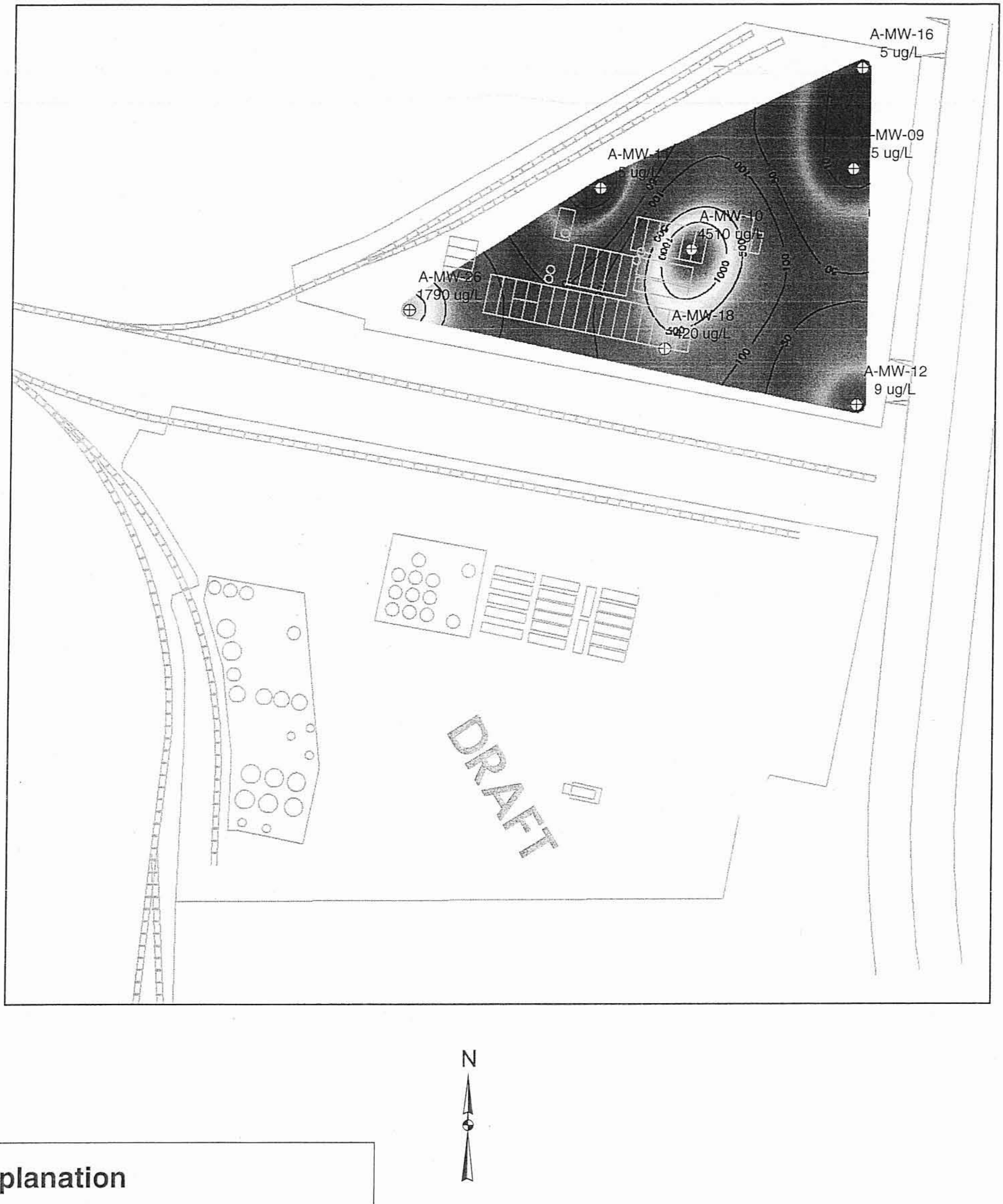
Data from upper 2 ft have been omitted to improve visibility of deeper soil. Omitted data are plotted and color-coded on the boring representations and are provided in the tables.

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 3-4** **PCE in Soil (>10 mg/kg)**
	Expert's Report February 2004	



Data from upper 2 ft have been omitted to improve visibility of deeper soil.
Omitted data are plotted and color-coded
on the boring representations and are provided in the tables.

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 3-5** **TCE in Soil (>10 mg/kg)**
	Expert's Report February 2004	

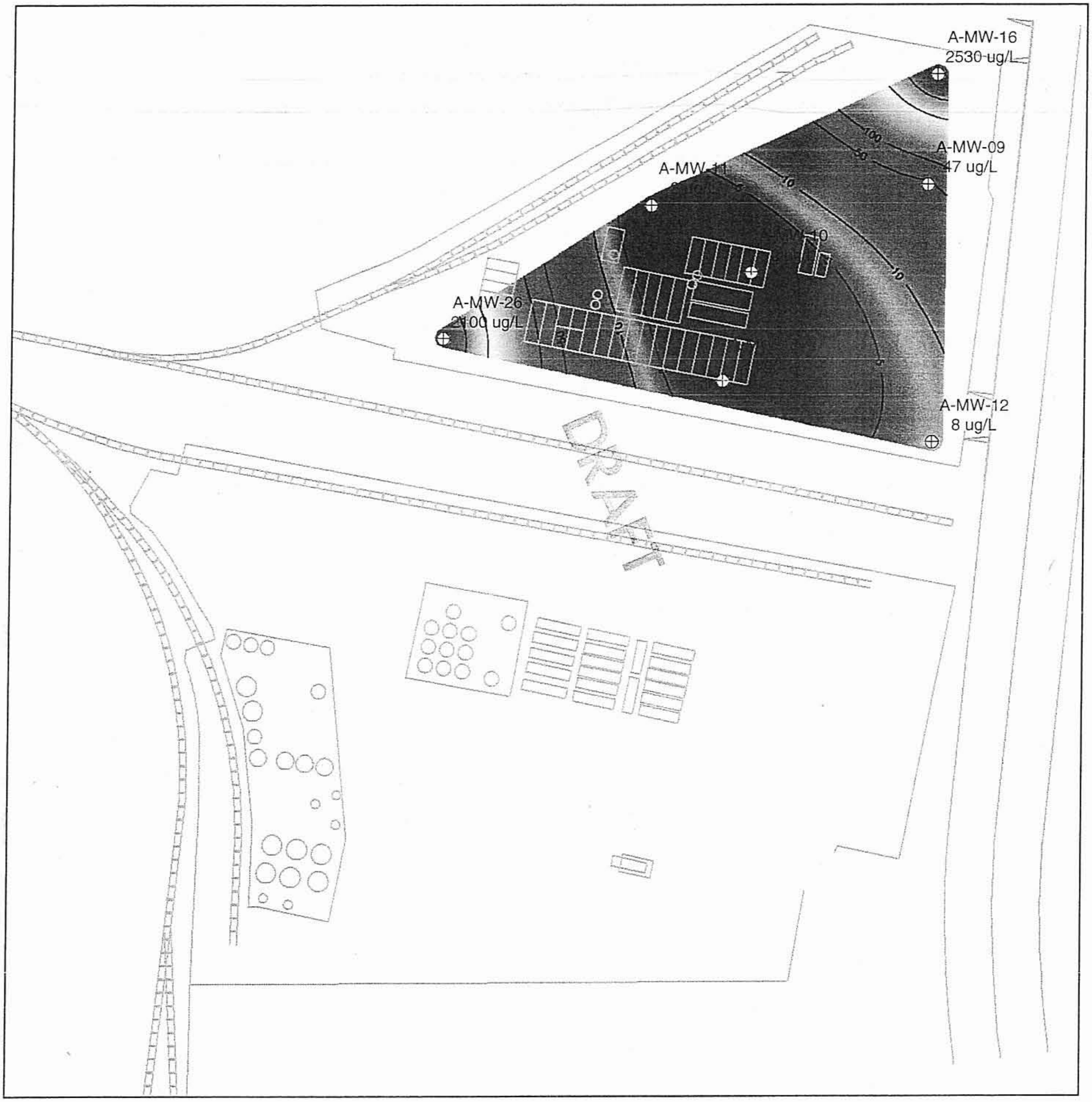


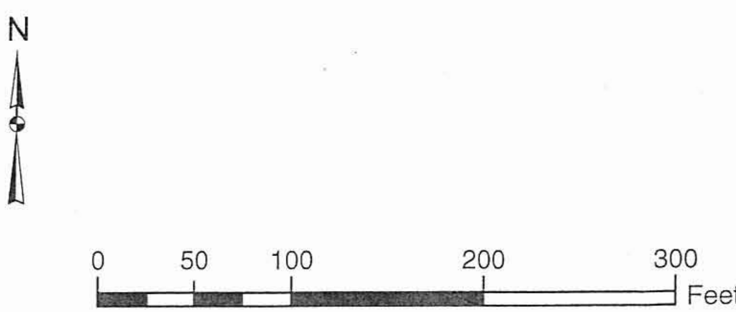
Explanation

—— Basemap Features

⊕ 1,1,1-TCA Concentrations in Shallow Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-6** **Distribution of 1,1,1-TCA in Shallow Groundwater**





Explanation

—— Basemap Features

⊕ TCE Concentrations in Shallow Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-7** **Distribution of TCE in Shallow Groundwater**

Explanation

- Basemap Features
- ⊕ PCE Concentrations in Shallow Wells

0 50 100 200 300 Feet

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
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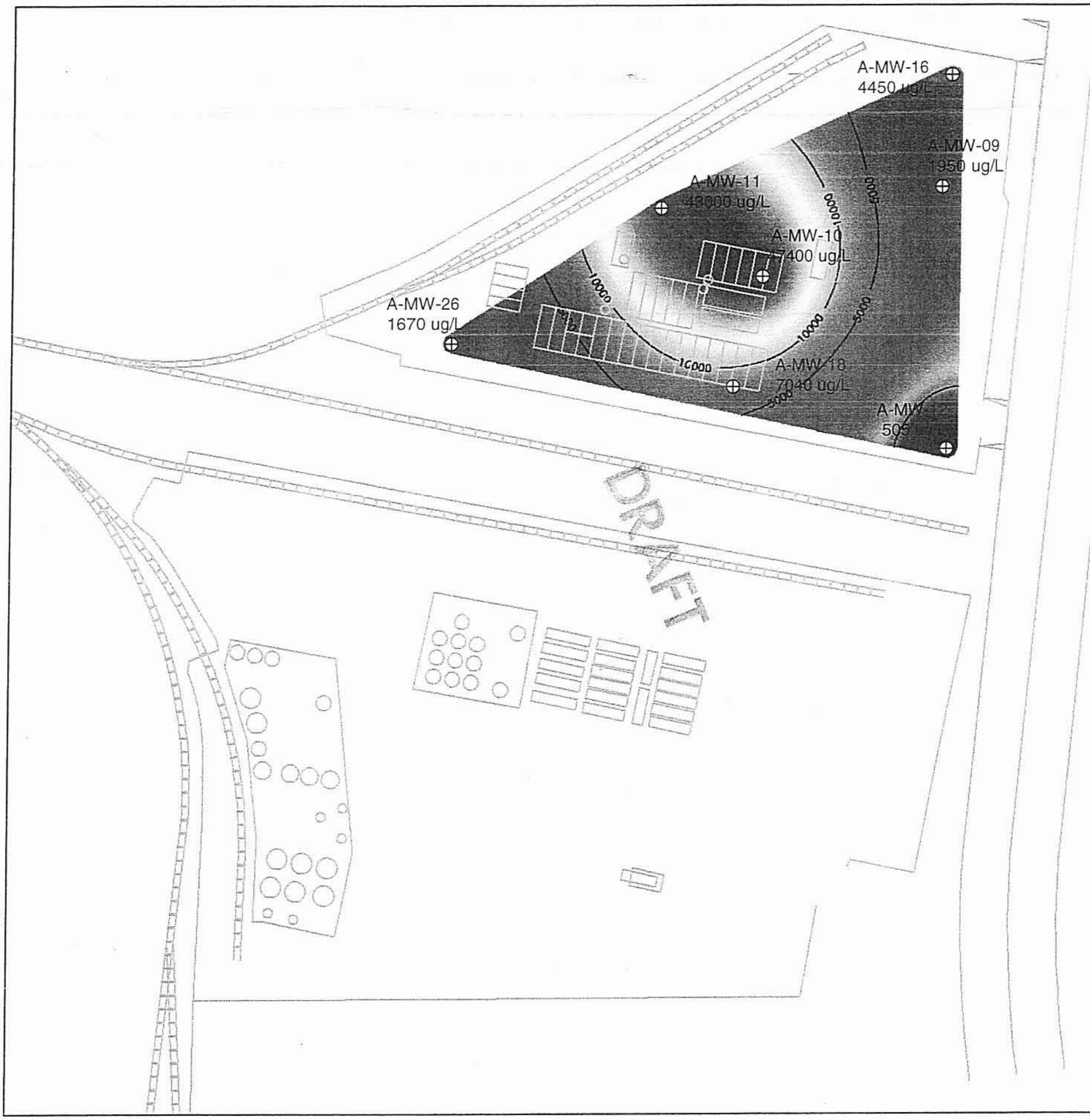
Figure 3-8
Distribution of PCE in Shallow Groundwater



N

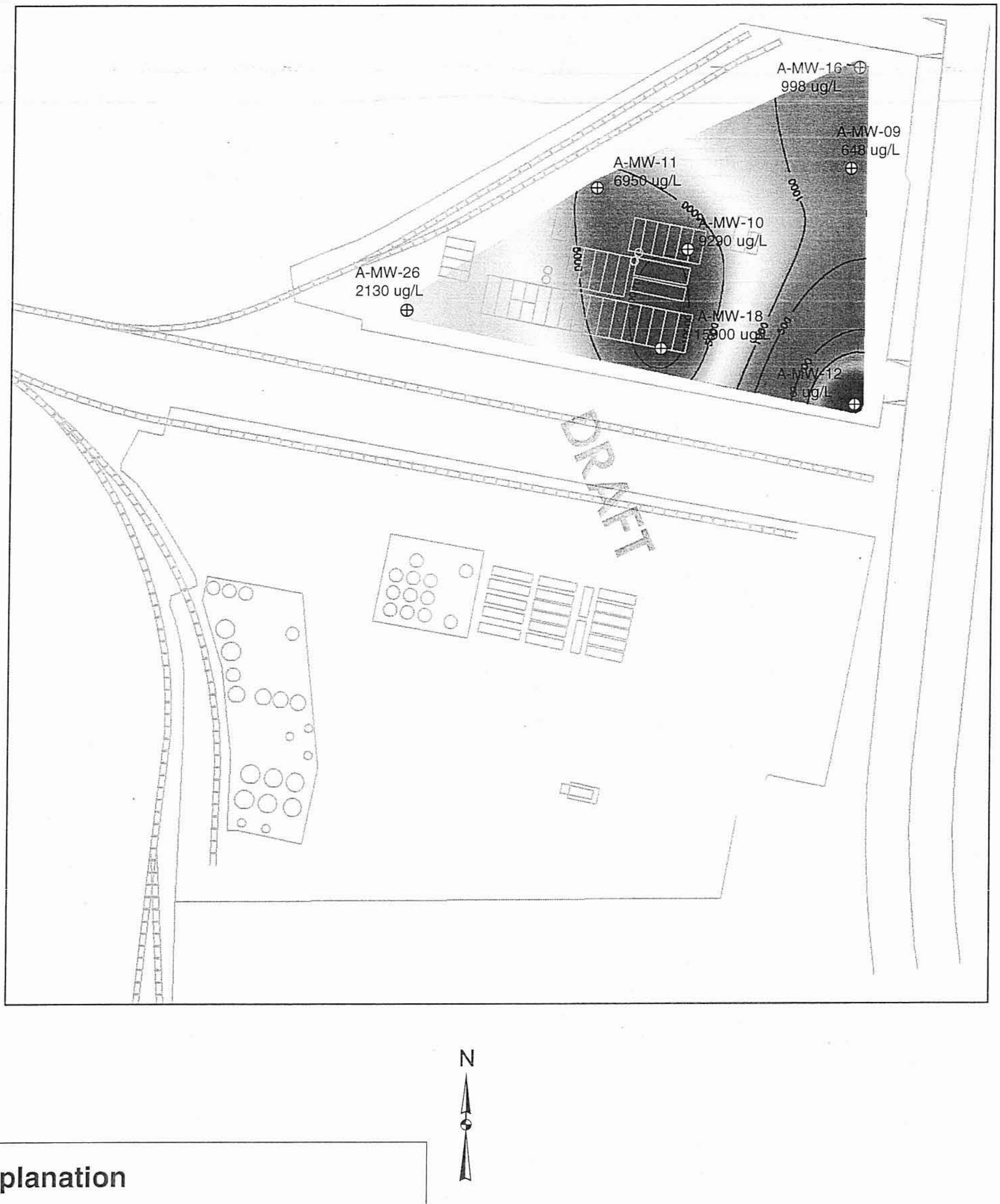
Explanation

—— Basemap Features

⊕ 1,1-DCA Concentrations in Shallow Wells

0 50 100 200 300 Feet

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-9** **Distribution of 1,1-DCA in Shallow Groundwater**



Explanation

—— Basemap Features

⊕ Cis-1,2-DCE Concentrations in Shallow Wells

0 50 100 200 300 Feet

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
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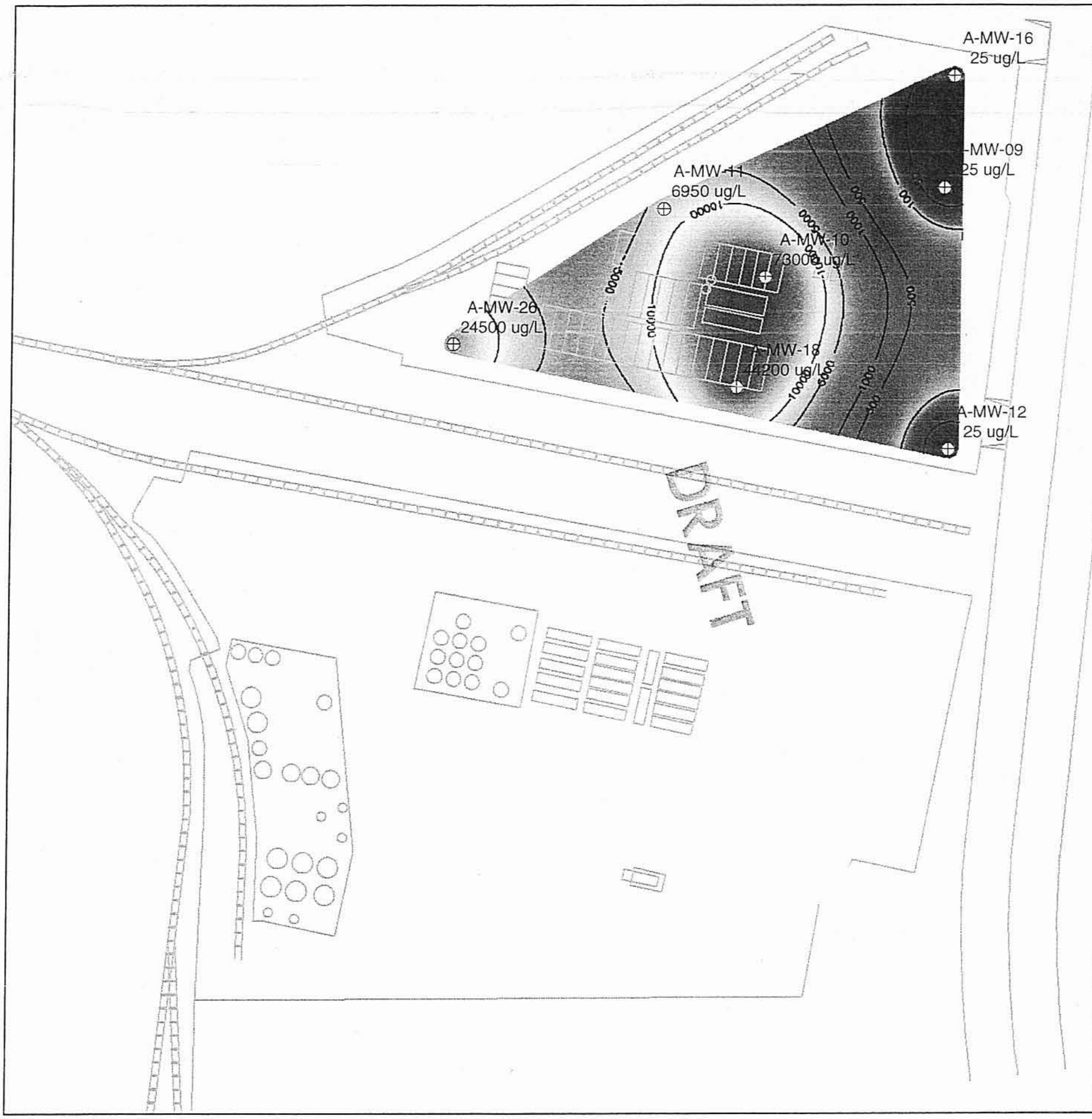
Figure 3-10
Distribution of Cis-1,2-DCE in Shallow Groundwater



N

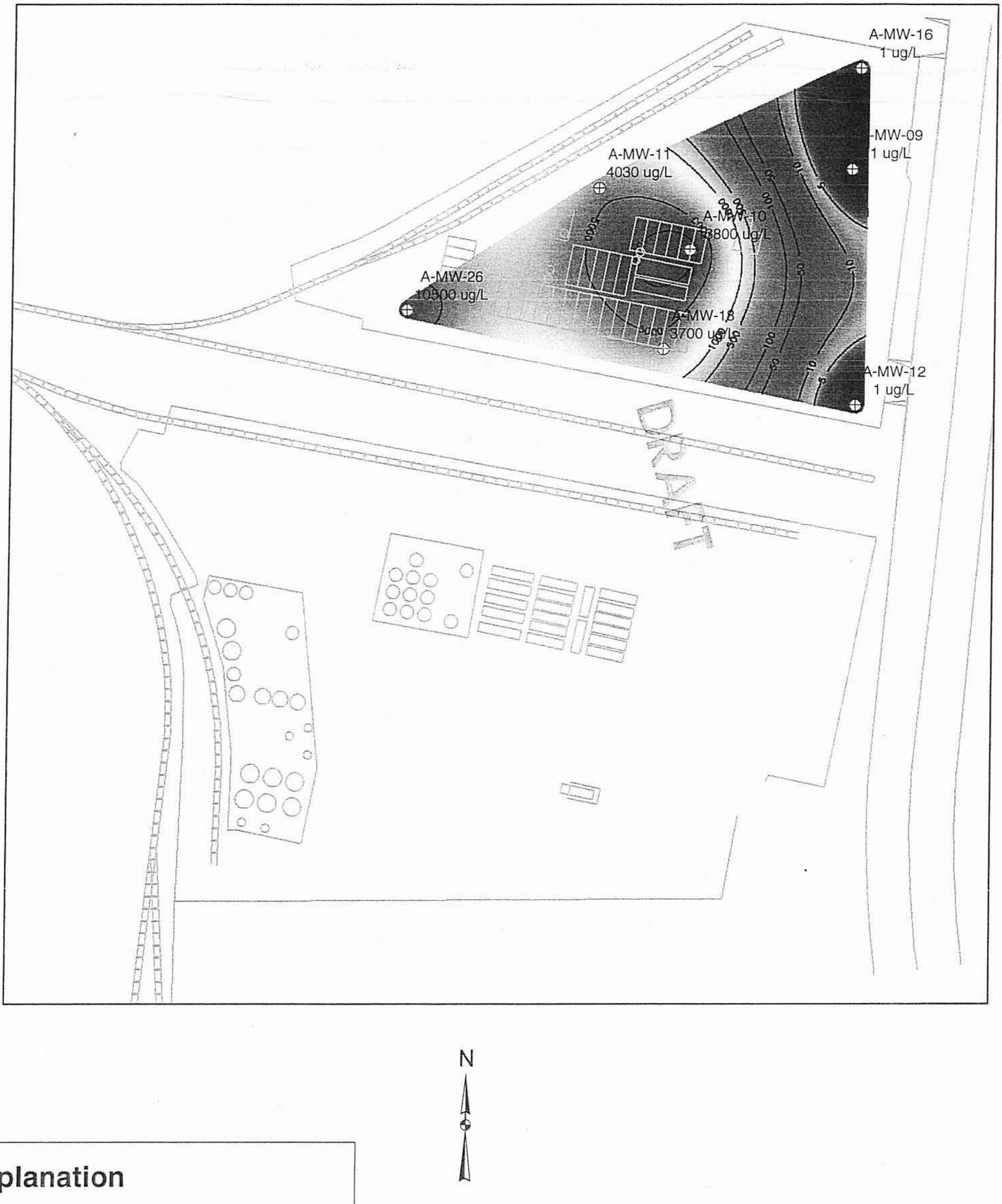
Explanation

—— Basemap Features

⊕ Acetone Concentrations in Shallow Wells

0 50 100 200 300 Feet

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 3-11** **Distribution of Acetone in Shallow Groundwater**
	Site Characterization Report February 2004	



Explanation

—— Basemap Features

⊕ Toluene Concentrations in Shallow Wells

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

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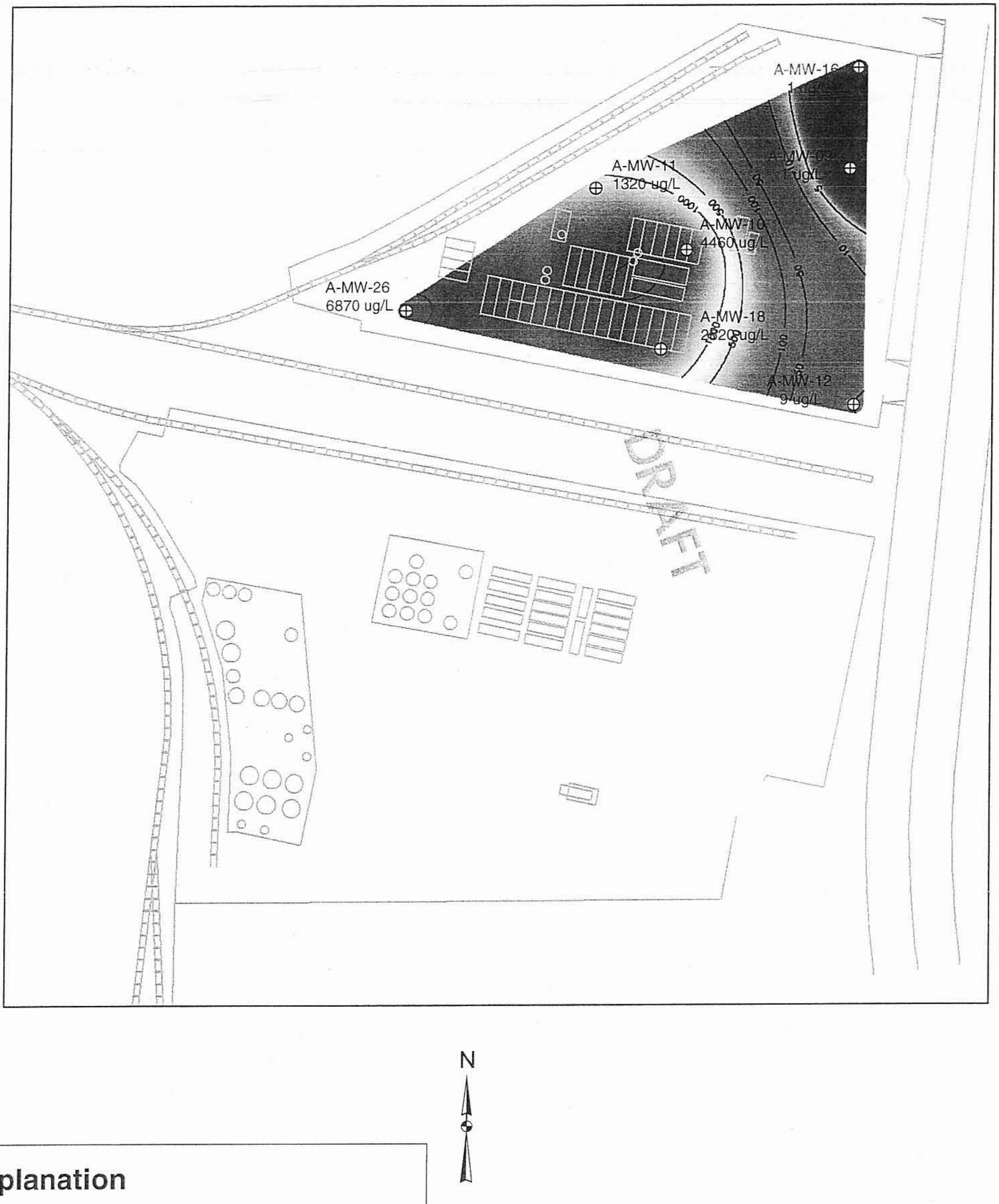
Figure 3-12
Distribution of Toluene in Shallow Groundwater

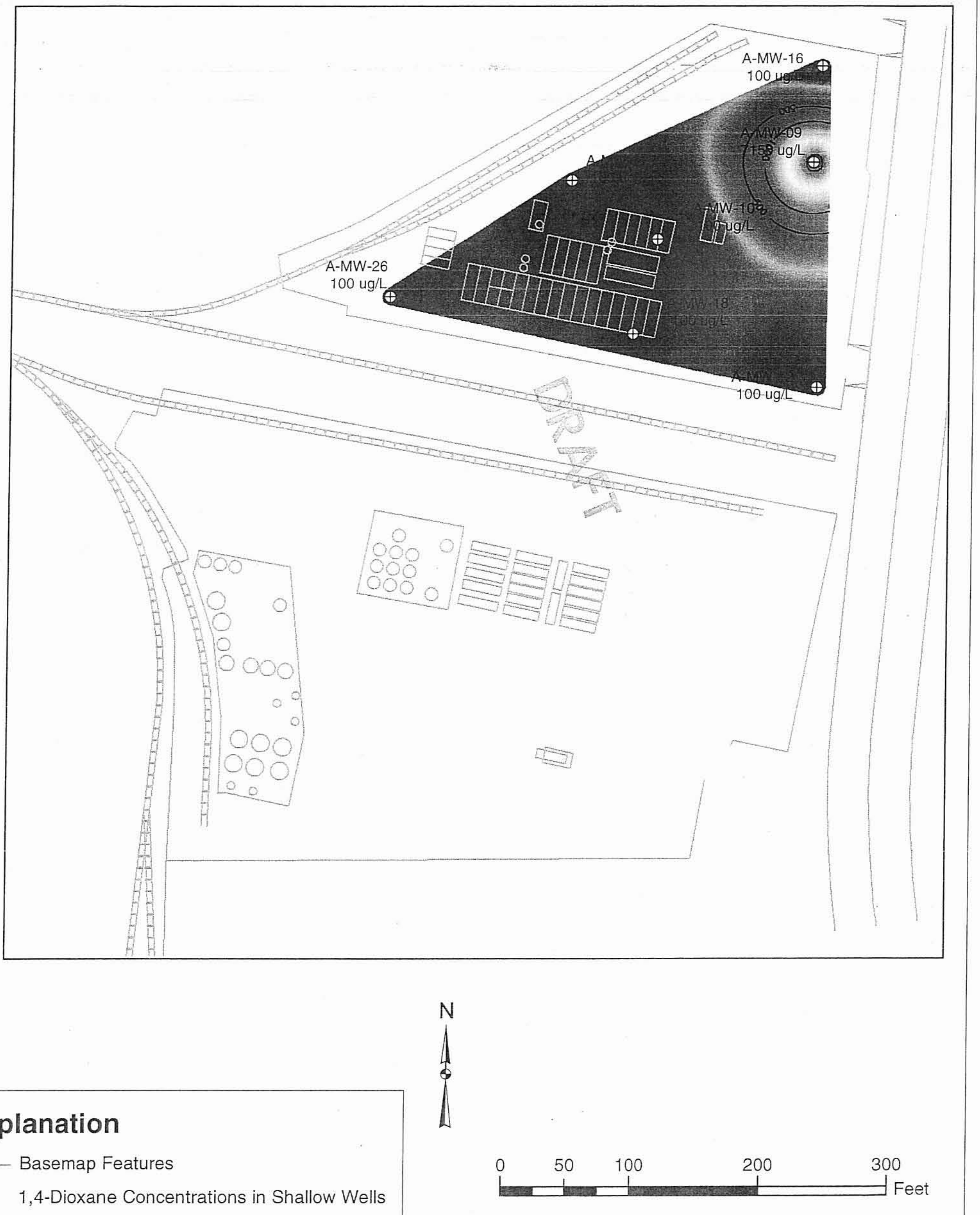


Explanation

—— Basemap Features

⊕ Total Xylene Concentrations in Shallow Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-13** **Distribution of Total Xylenes in Shallow Groundwater**

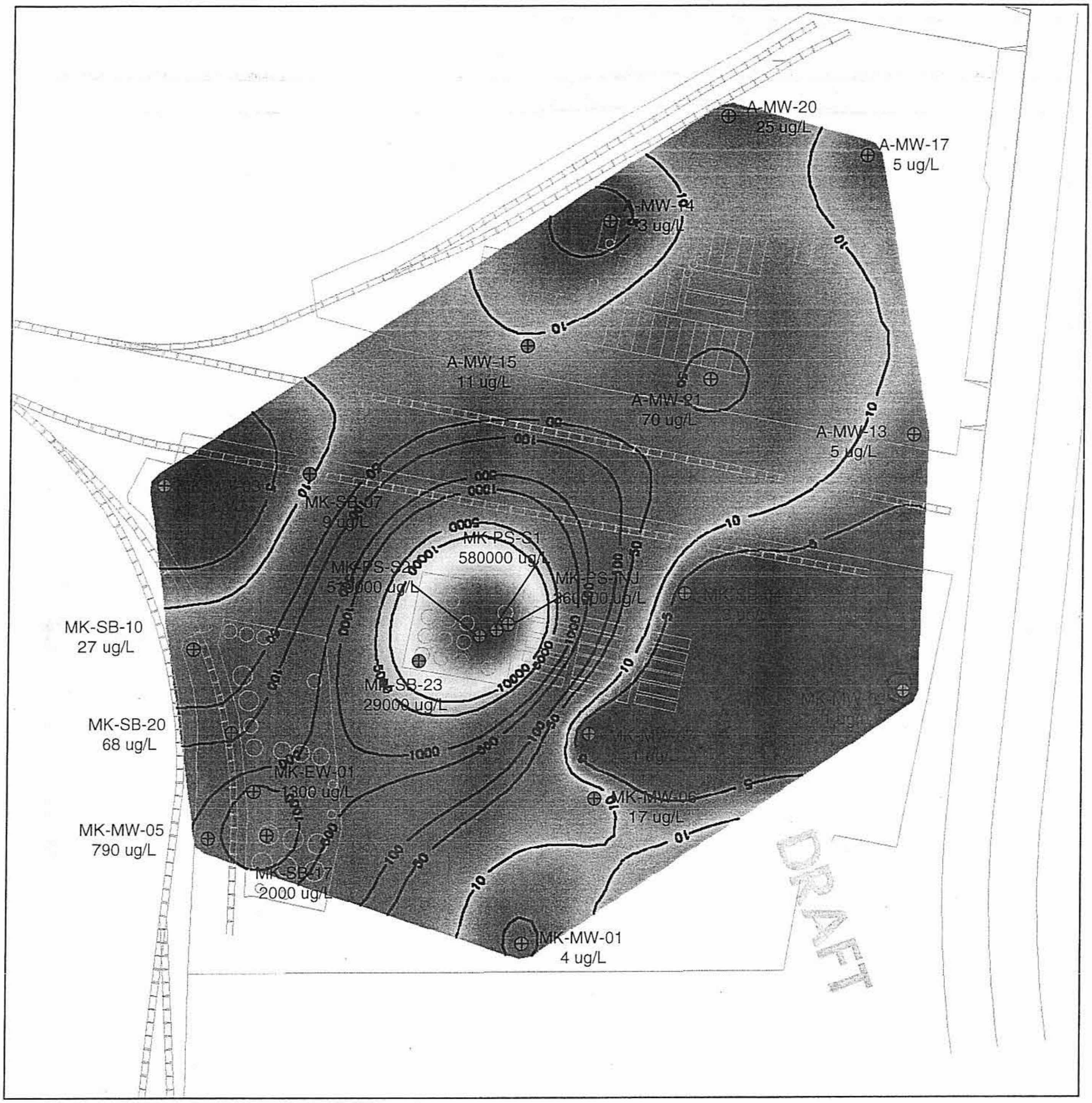


Explanation

—— Basemap Features

⊕ 1,4-Dioxane Concentrations in Shallow Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-14** **Distribution of 1,4-Dioxane in Shallow Groundwater**



Explanation

—— Basemap Features

⊕ 1,1,1-TCA Concentrations in Deep Wells

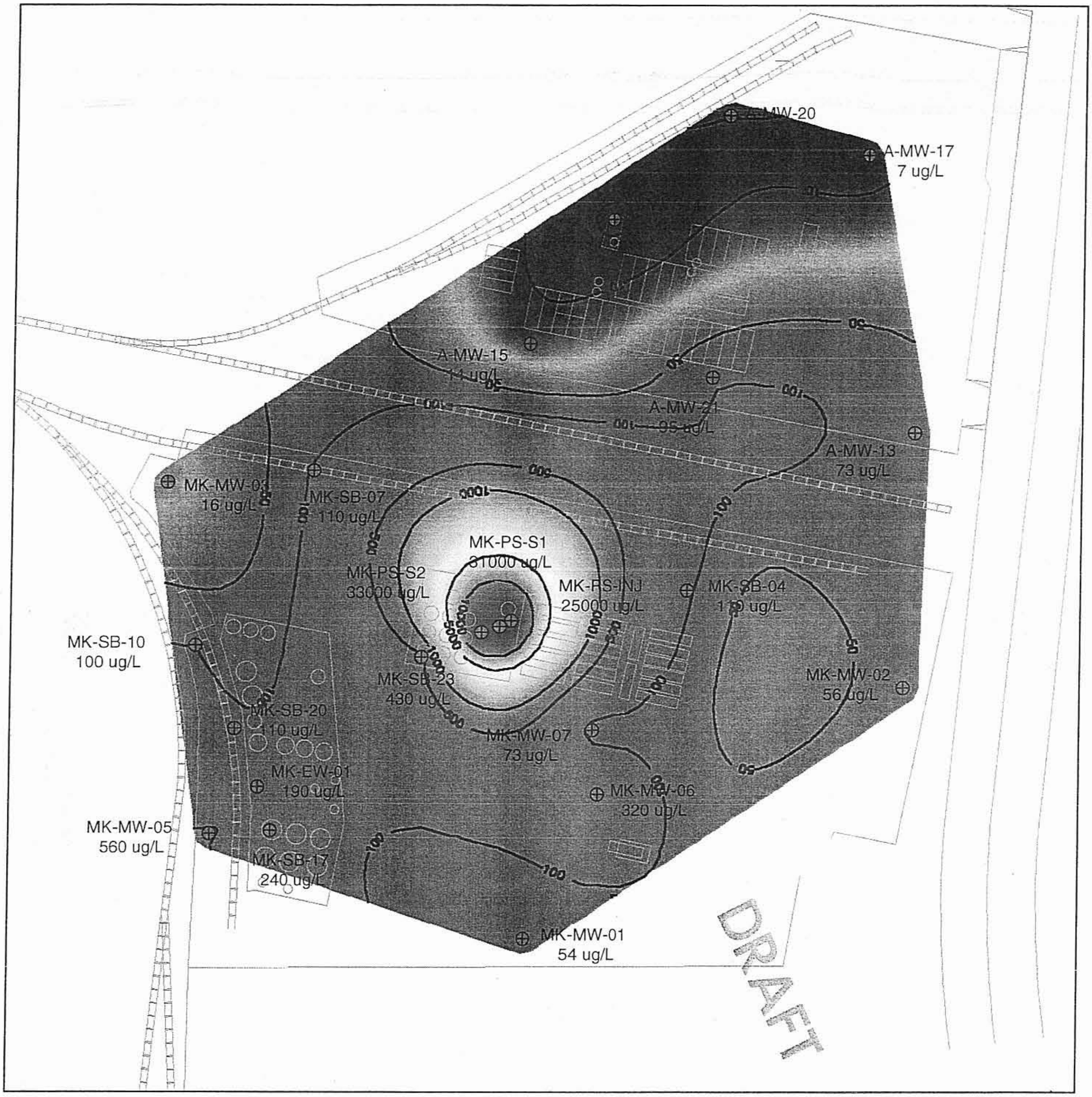
0 50 100 200 300 Feet

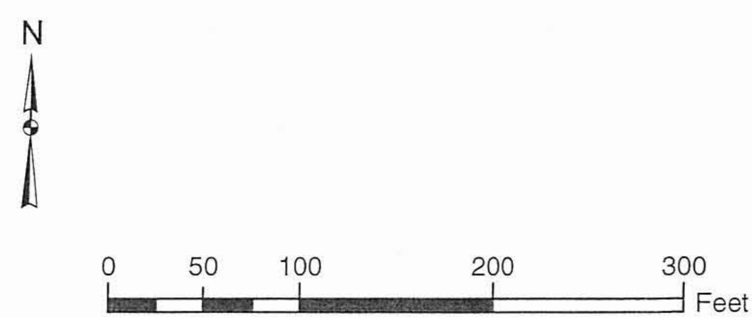
Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 3-15
Distribution of 1,1,1-TCA in Deep Groundwater



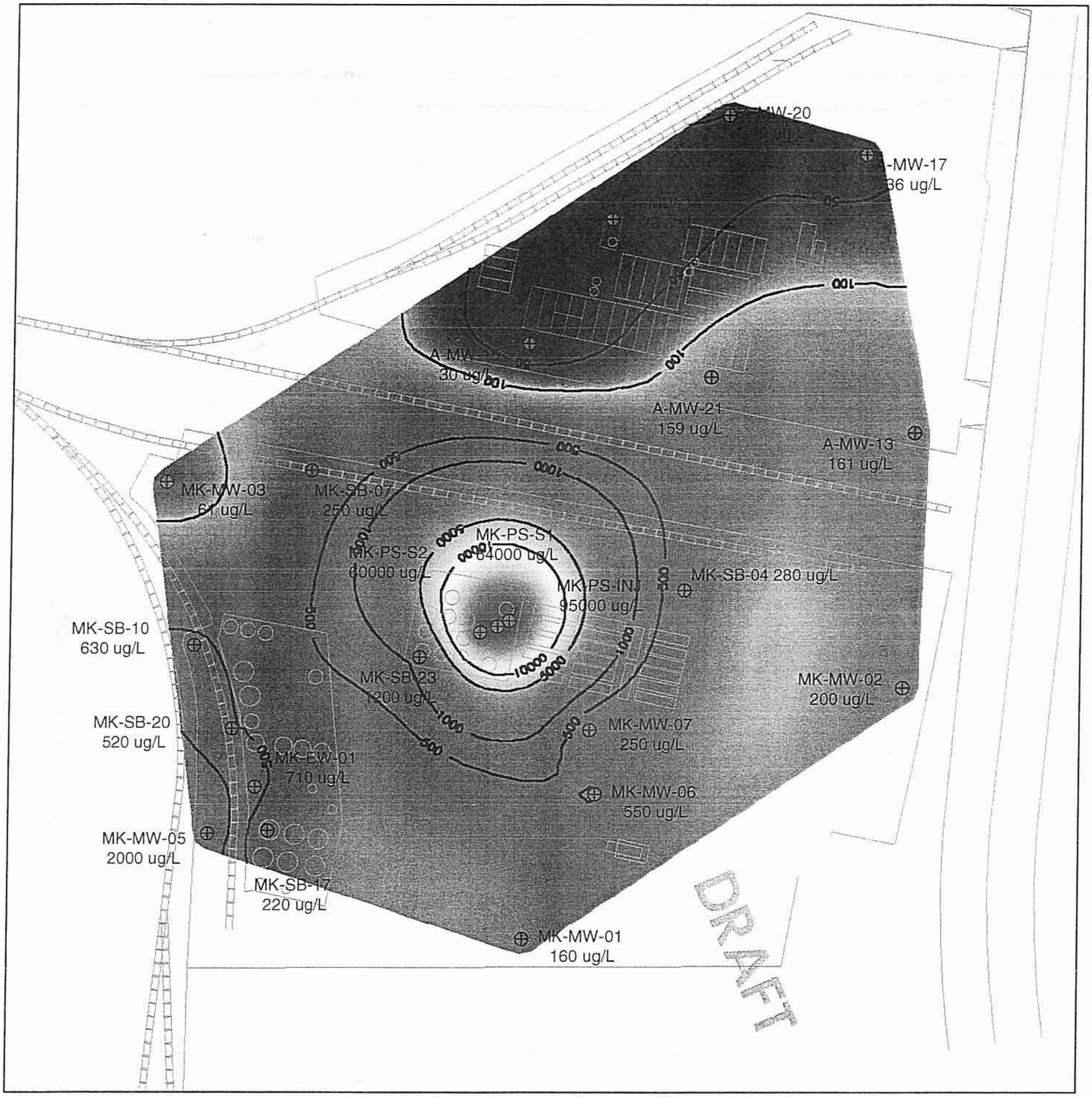


Explanation

——— Basemap Features

⊕ TCE Concentrations in Deep Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 3-16** **Distribution of TCE in Deep Groundwater**
	Site Characterization Report February 2004	

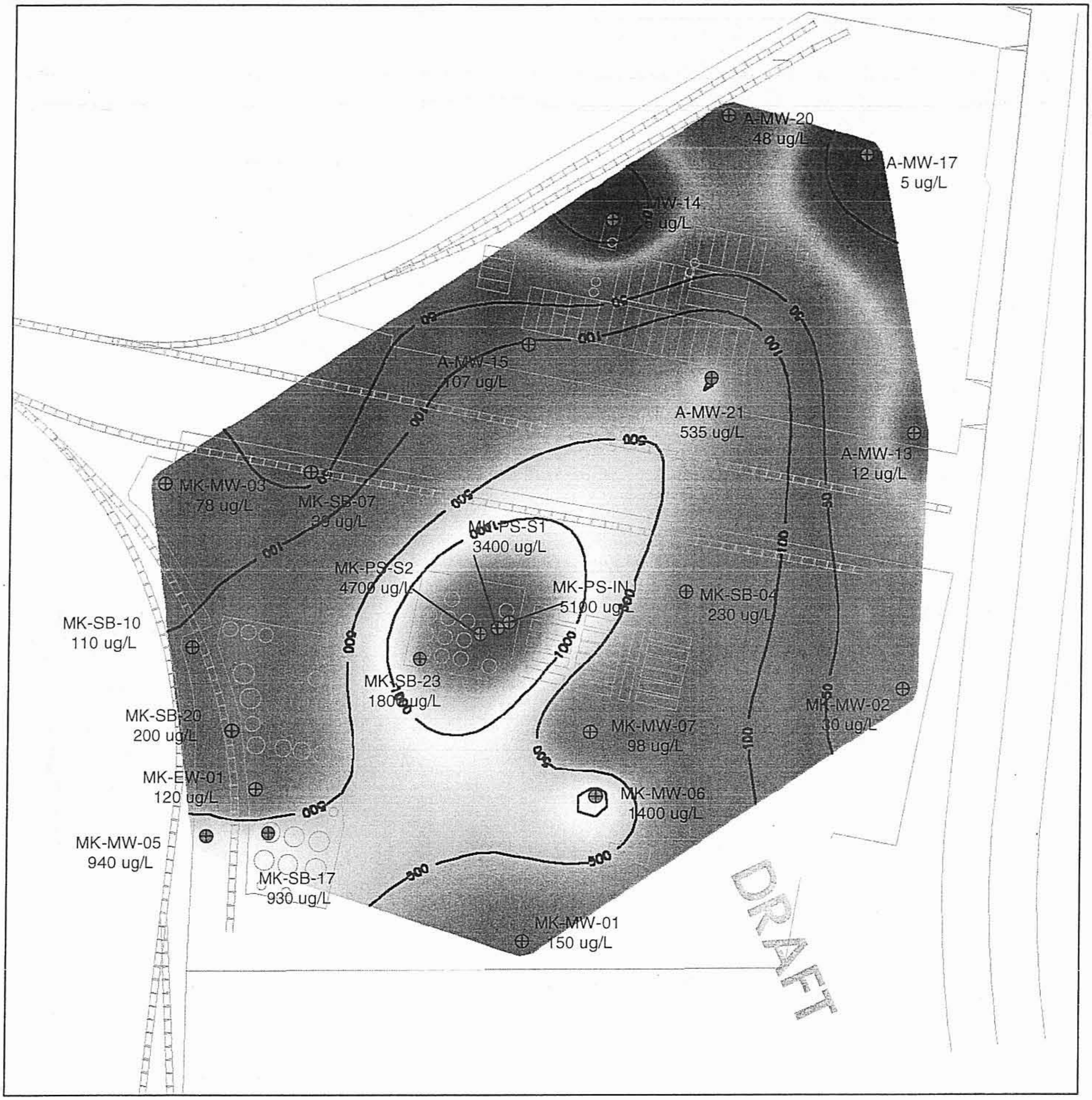


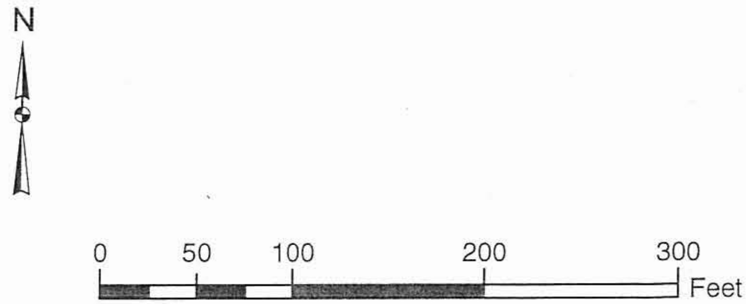
Explanation

—— Basemap Features

⊕ PCE Concentrations in Deep Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-17** **Distribution of PCE in Deep Groundwater**



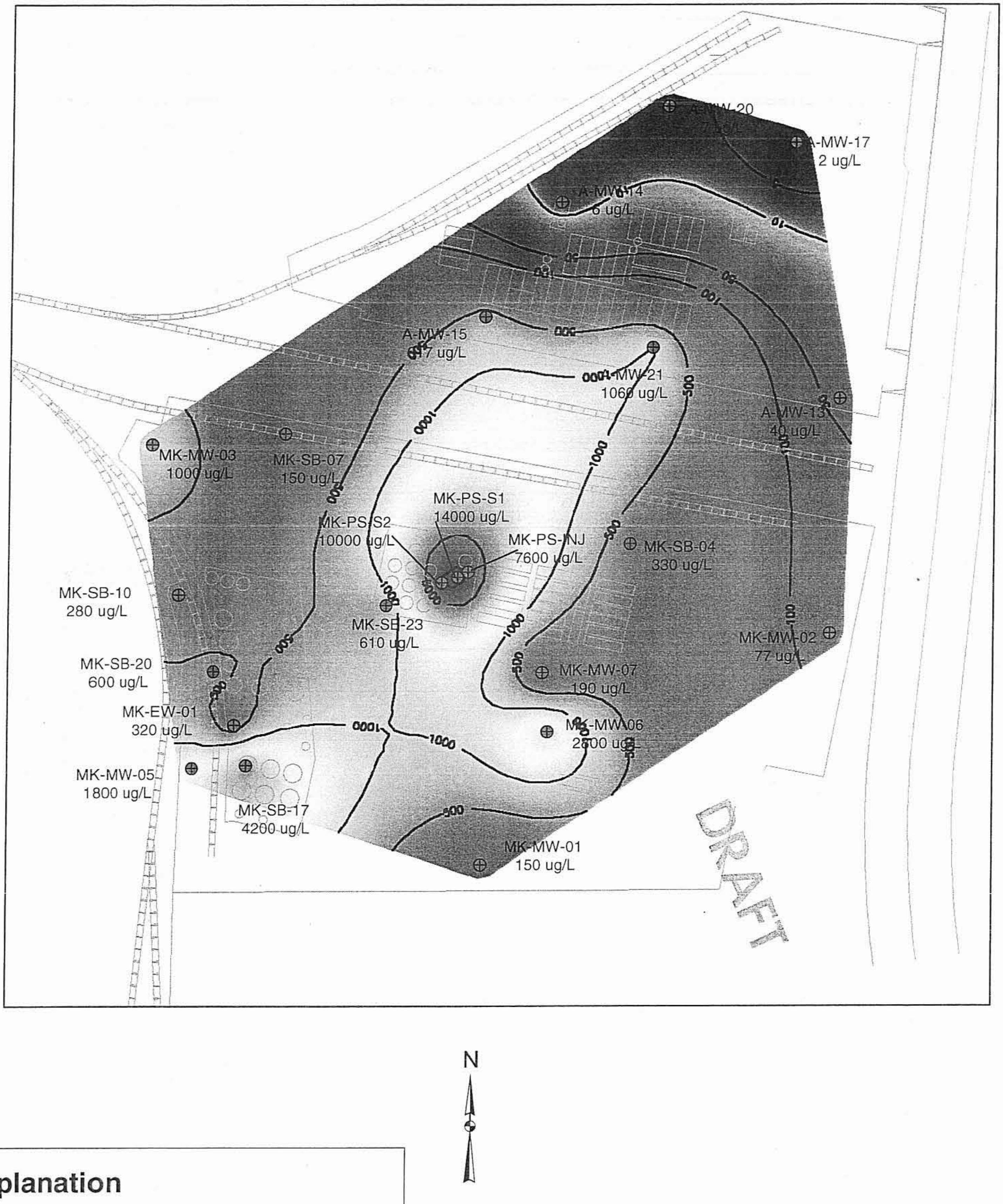


Explanation

——— Basemap Features

⊕ 1,1-DCA Concentrations in Deep Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-18** **Distribution of 1,1-DCA in Deep Groundwater**



Explanation

Basemap Features

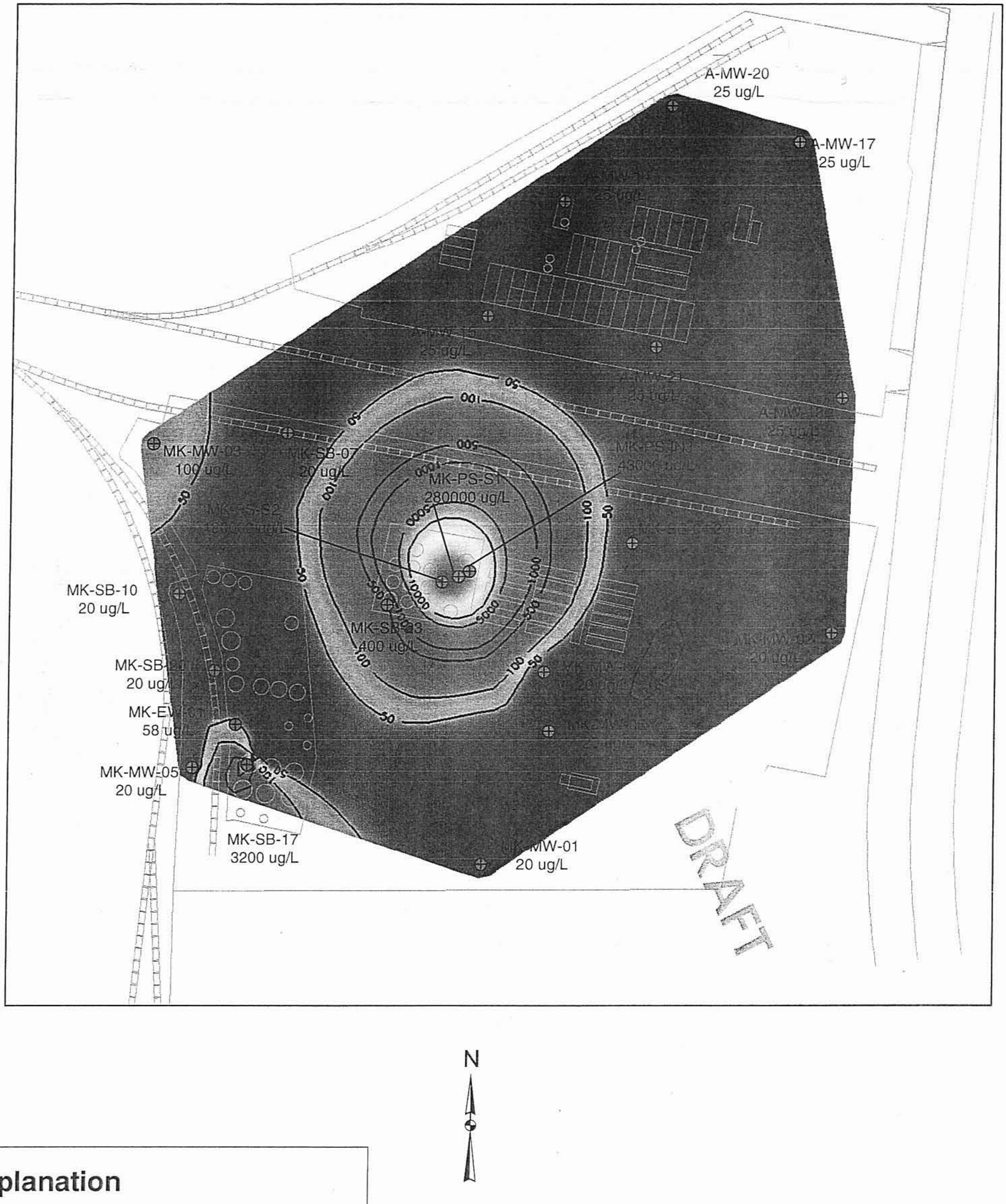
⊕ Cis-1,2-DCE Concentrations in Deep Wells

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 3-19
Distribution of Cis-1,2-DCE in Deep Groundwater



Explanation

Basemap Features

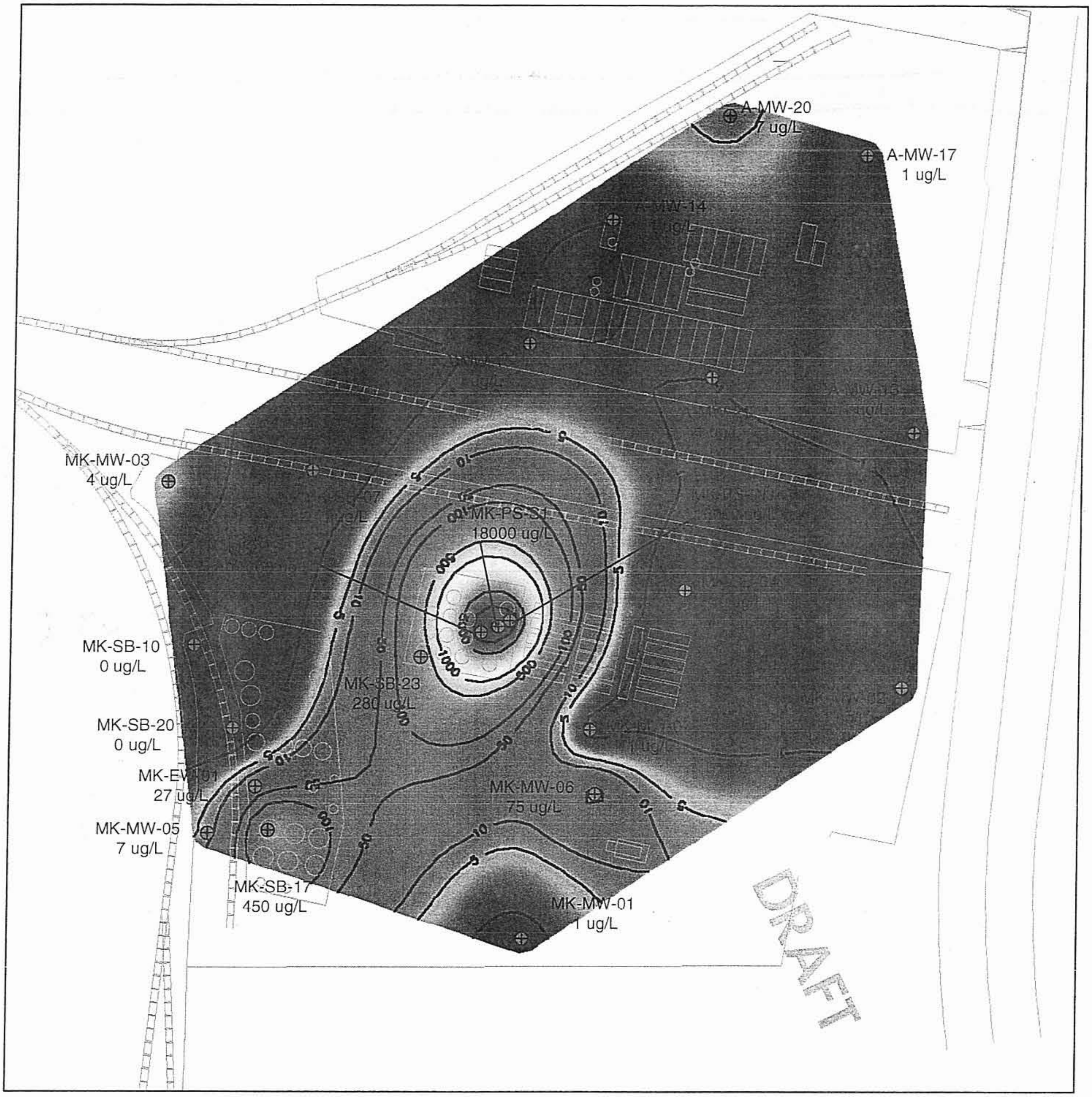
Acetone Concentrations in Deep Wells

Shaw® Shaw E & I

Angeles Chemical Company Site
Santa Fe Springs, CA

Site Characterization Report
February 2004

Figure 3-20
Distribution of Acetone in Deep Groundwater

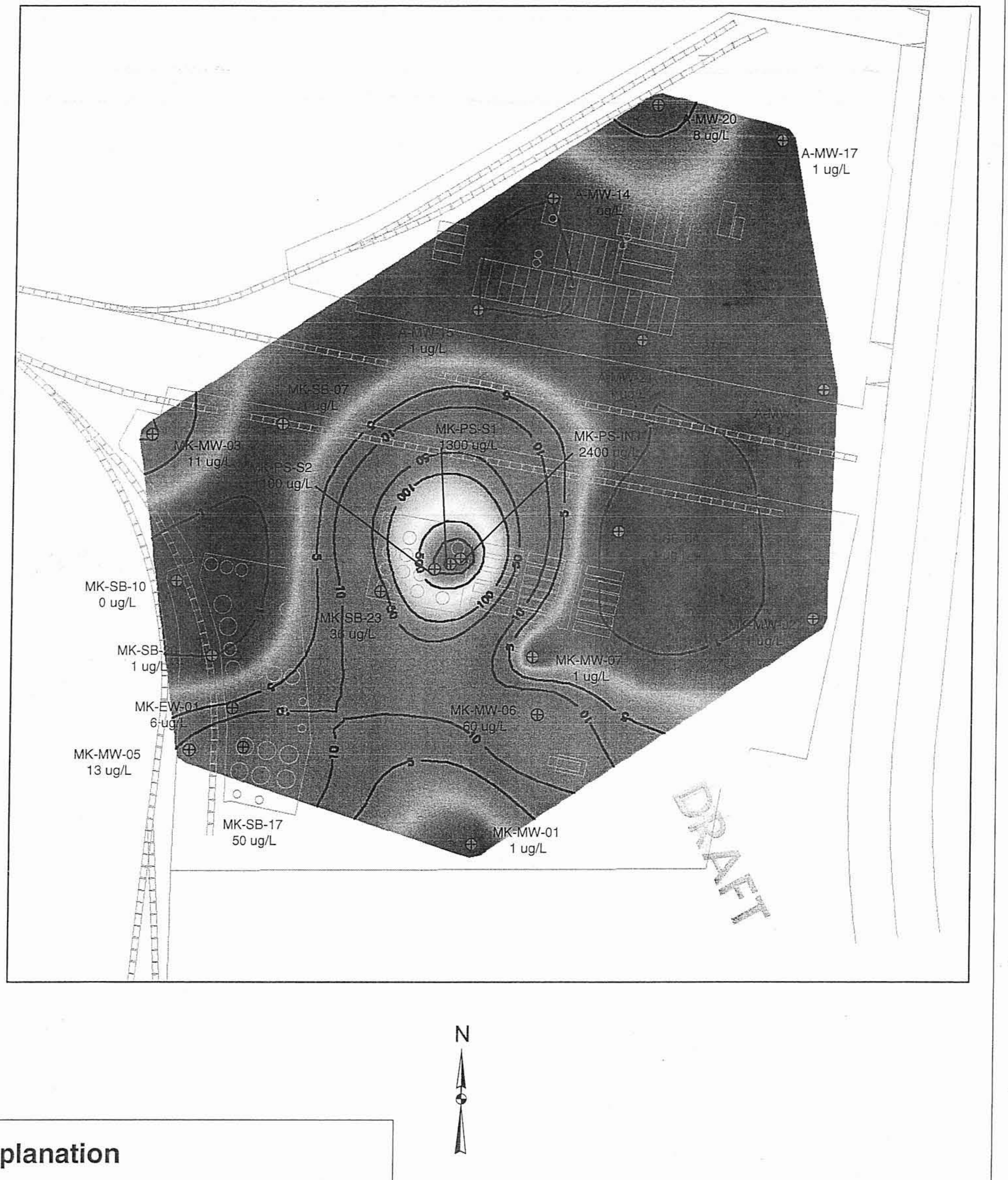


Explanation

—— Basemap Features

⊕ Toluene Concentrations in Deep Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-21** **Distribution of Toluene in Deep Groundwater**



Explanation

——— Basemap Features

⊕ Total xylene Concentrations in Deep Wells

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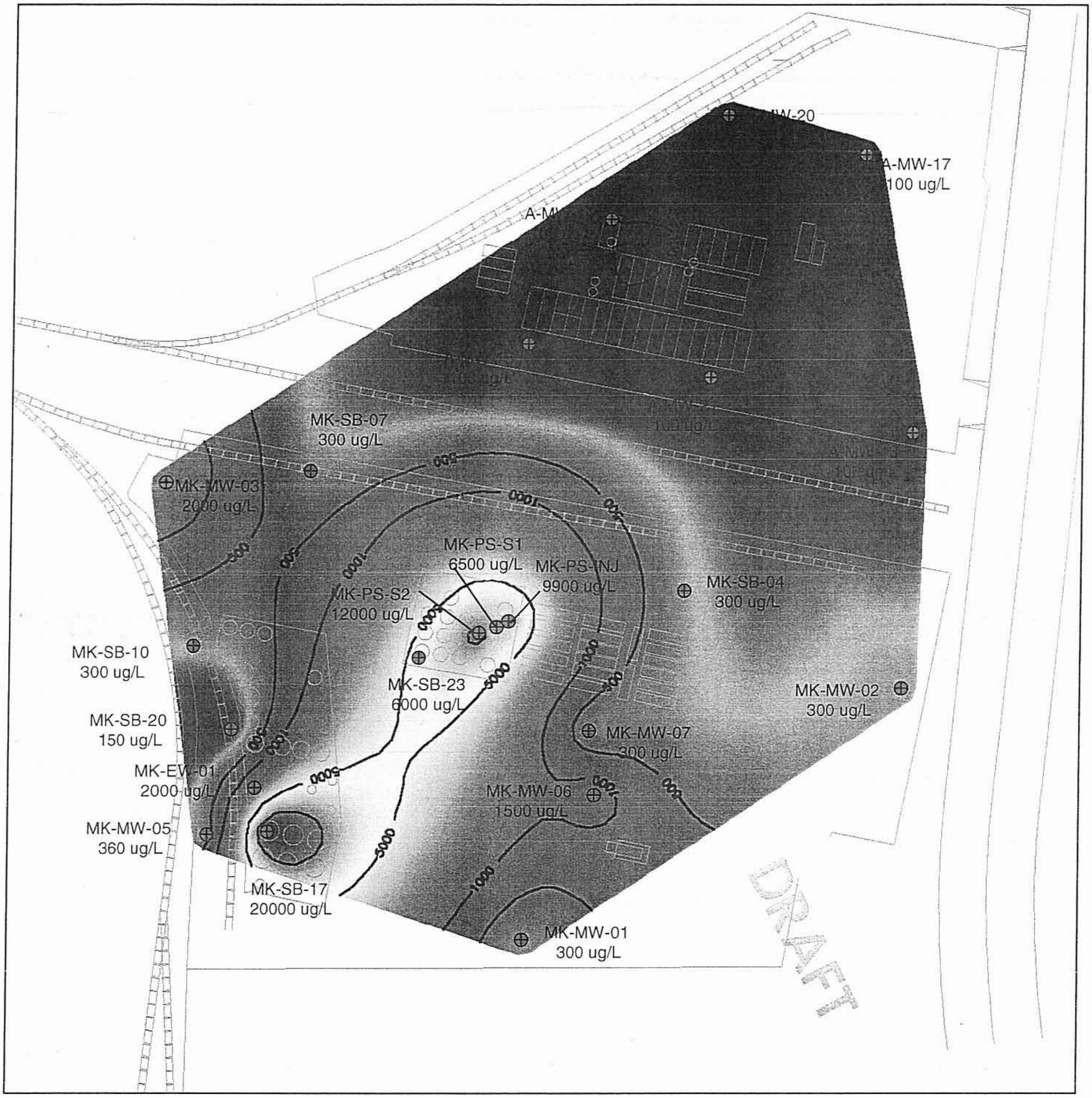
Figure 3-22
Distribution of Total Xylenes in Deep Groundwater

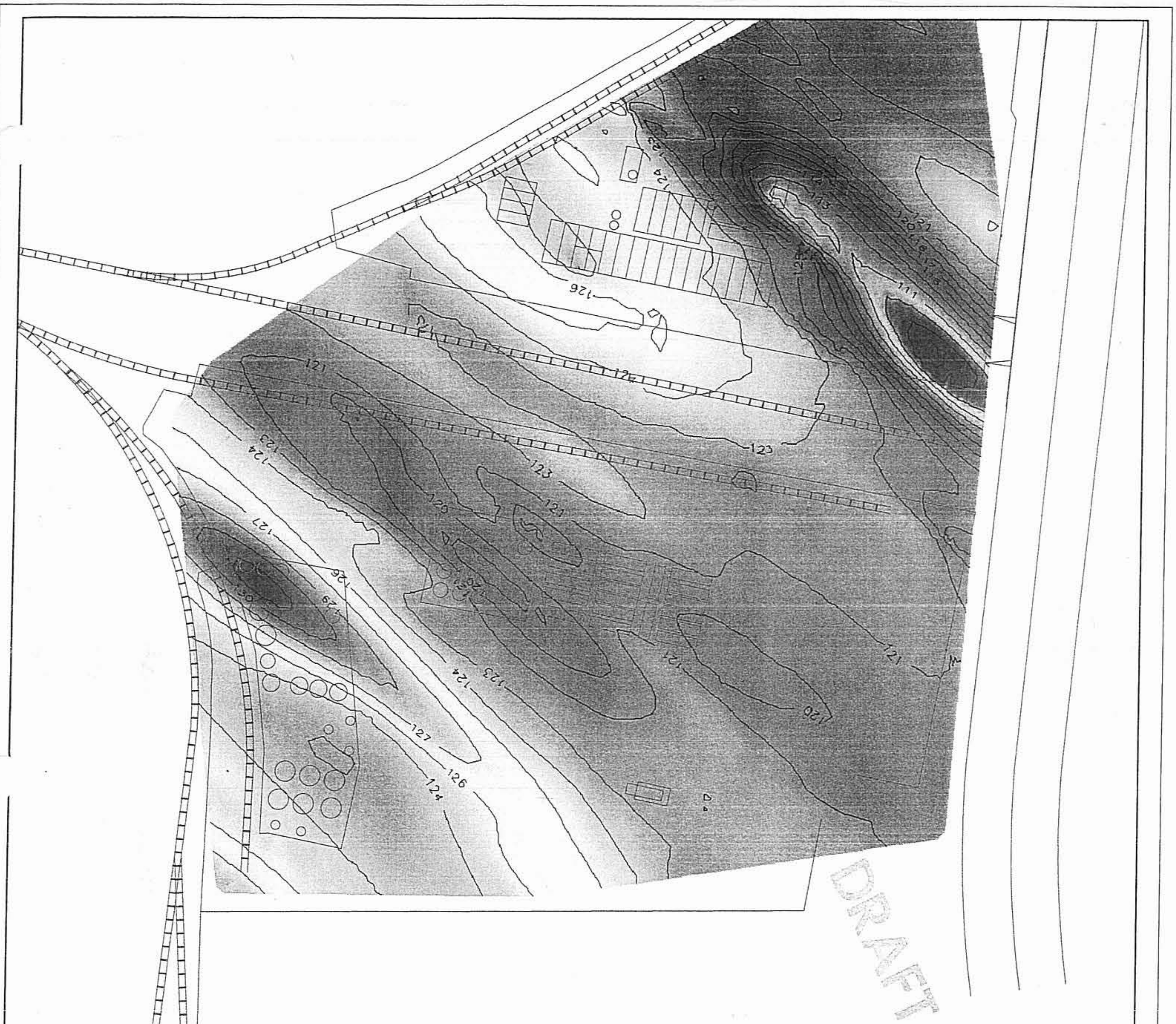


Explanation

—— Basemap Features

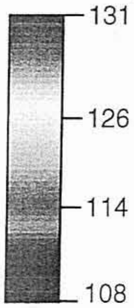
⊕ 1,4-Dioxane Concentrations in Deep Wells

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 3-23** **Distribution of 1,4-Dioxane in Deep Groundwater**



Explanation

Geologic Structure Elevation (ft)



N

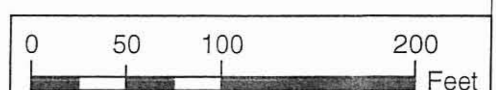


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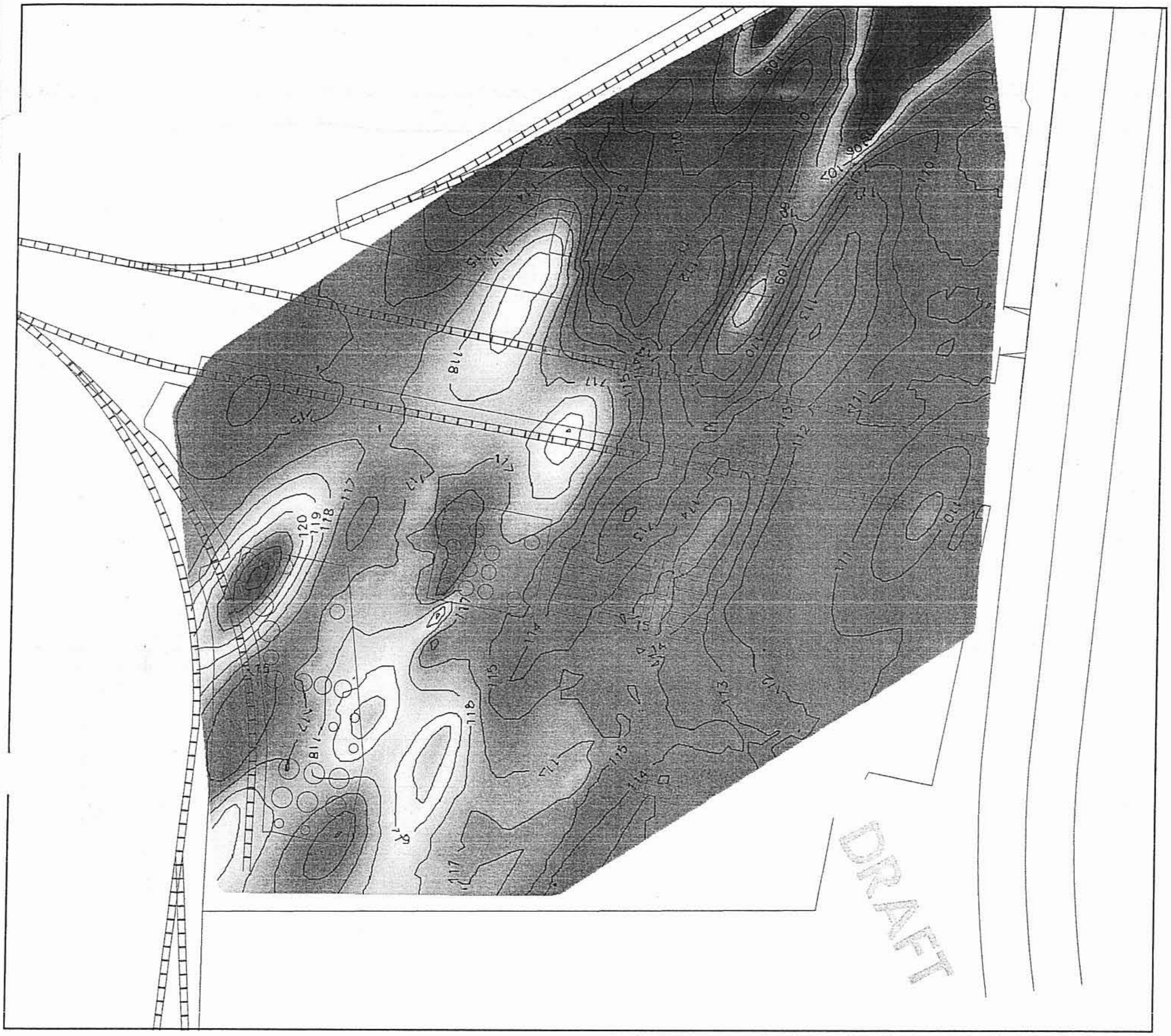
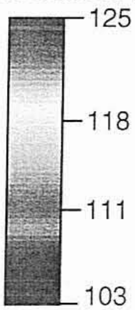
Figure 4-1
Structure Map Base of Unit B



Explanation

Geologic Structure Elevation (ft)



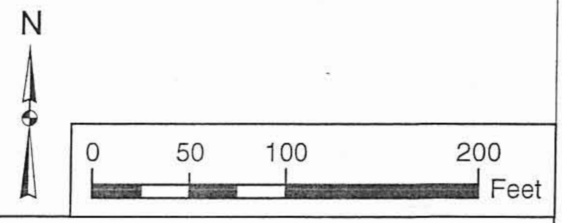


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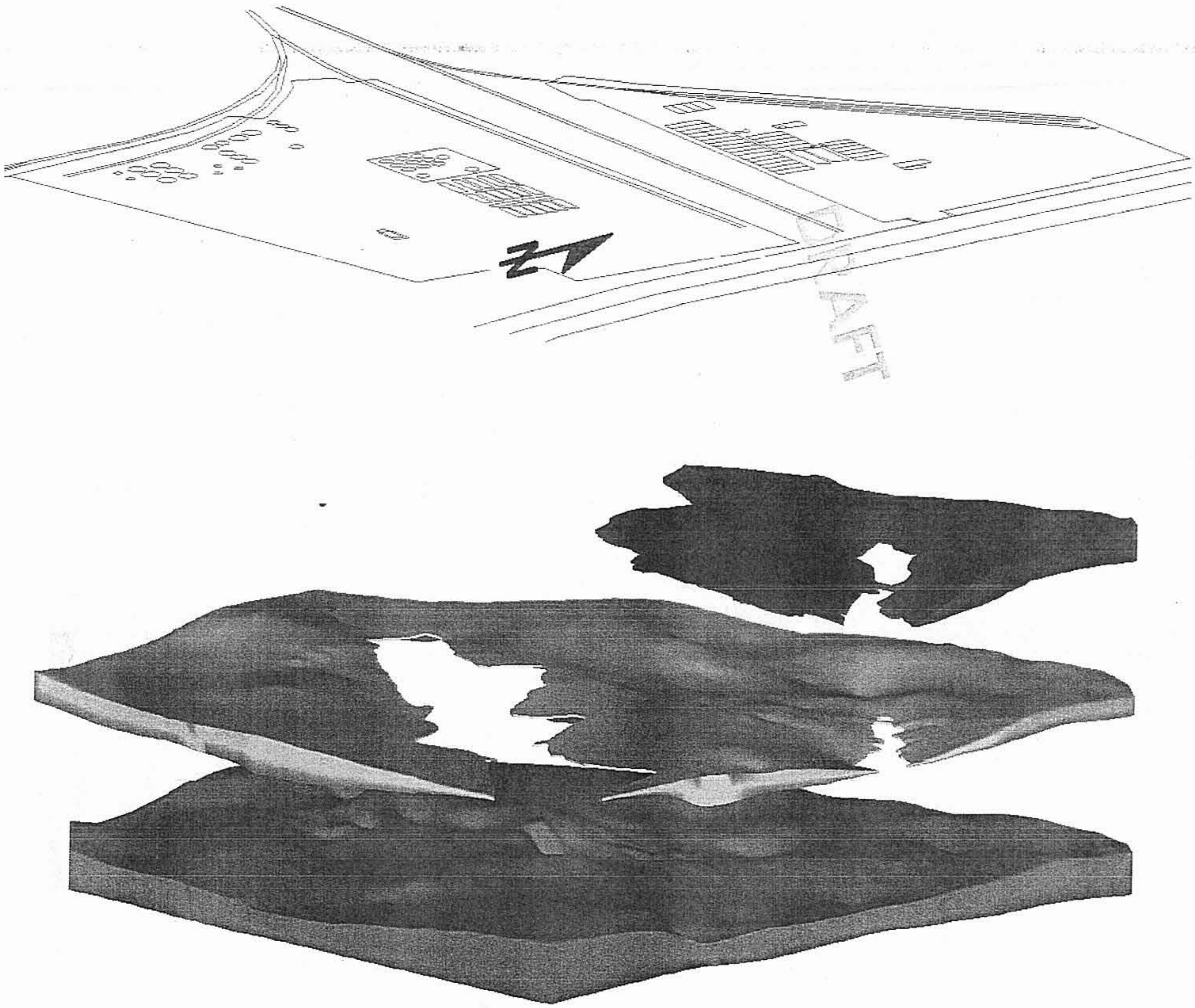
Figure 4-2
Structure Map Base of Unit D



Explanation

Hydrogeologic Units

- Unit C1-Silt
- Unit D-Silty sand
- Unit C2-Clayey silt

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Site Characterization Report February 2004	**Figure 4-3** **Exploded 3-D Visualization of Hydrogeologic Units C1, D, C2**

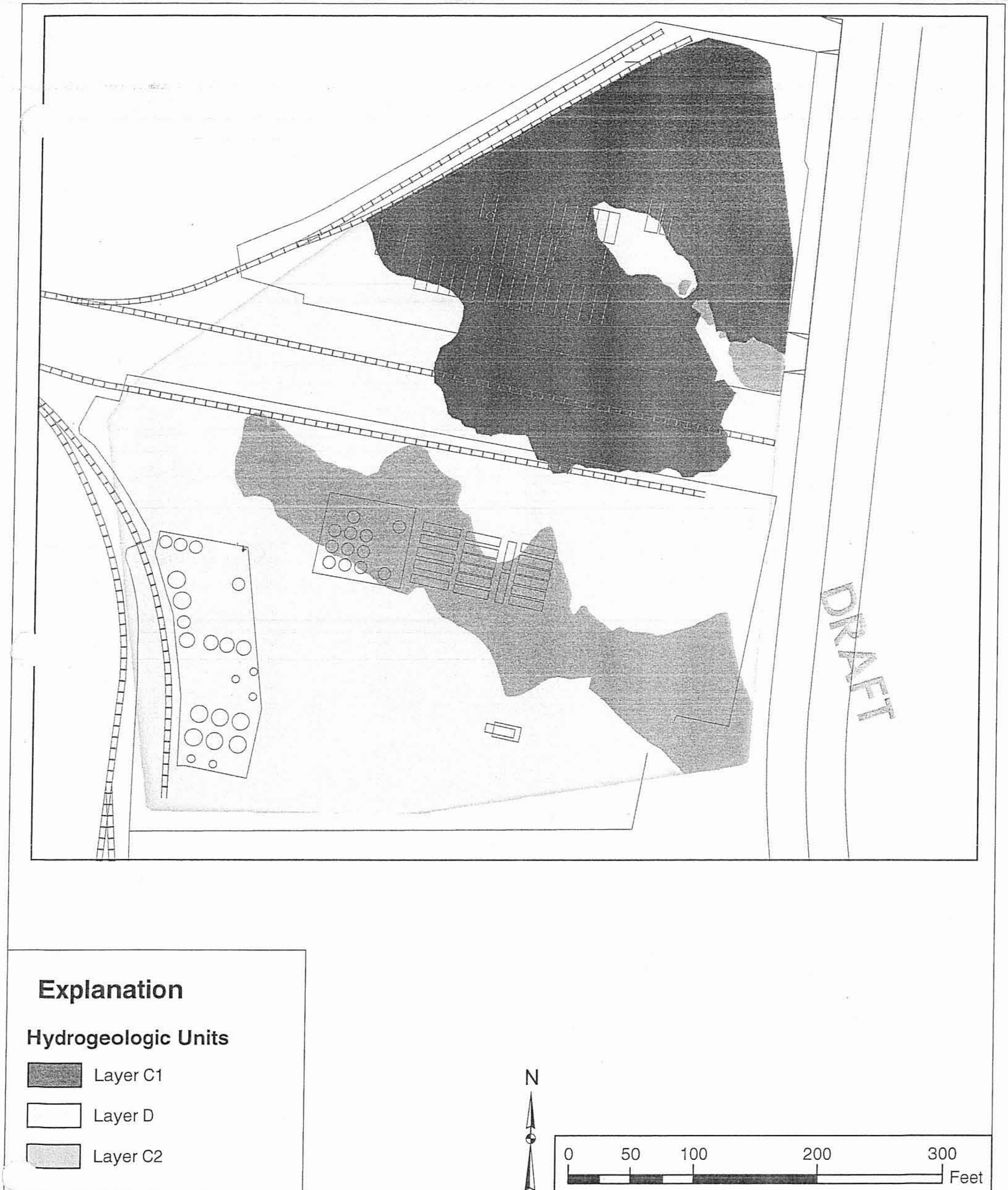


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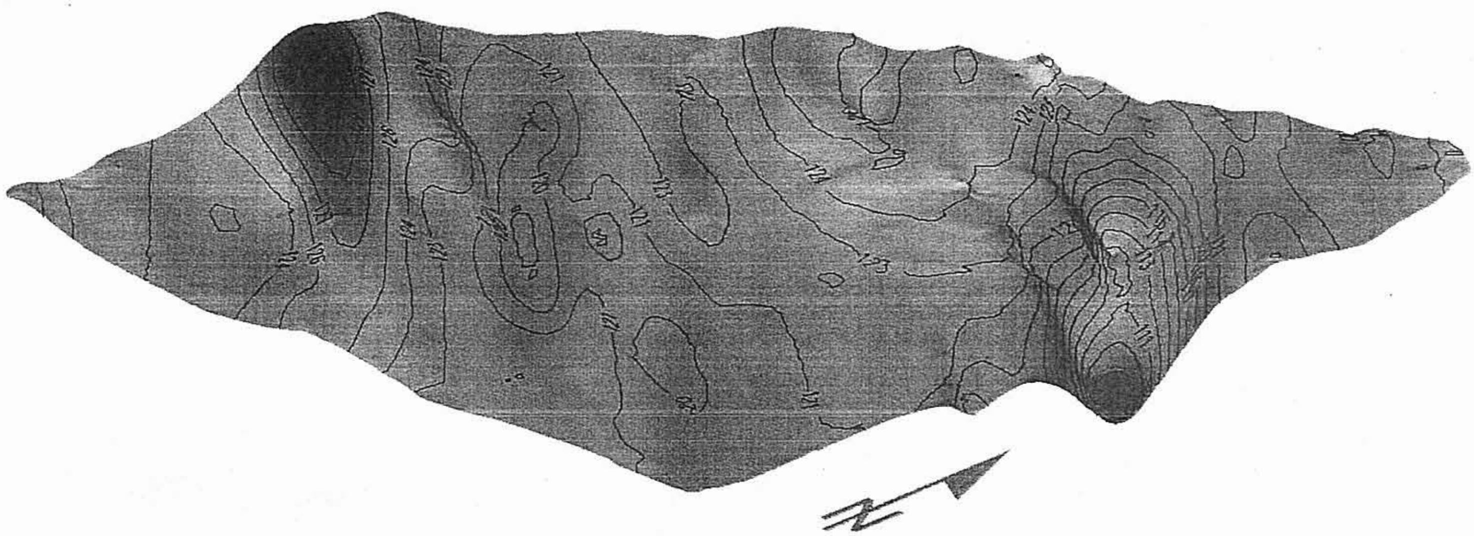
Figure 4-4
Map View of Units C1, D, and C2



DRAFT

Explanation

Elevation (ft)

!30

!19

108

Oblique view has 4X vertical exaggeration. View looking to the northwest.

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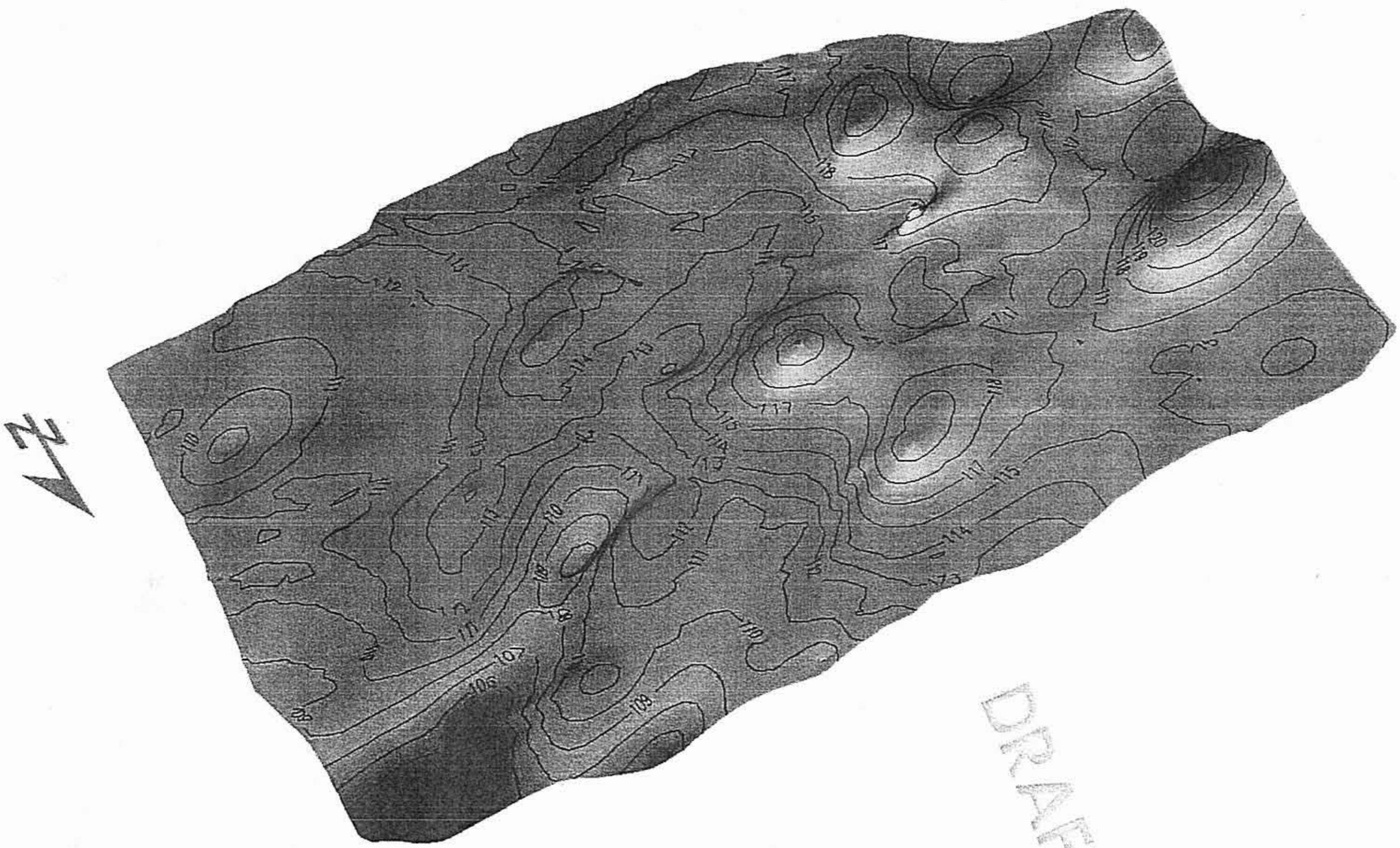
Figure 4-5
Oblique View of Base of Unit B



Explanation

Elevation (ft)

!23

!13

103

Oblique view has 4X vertical exaggeration. View looking to the south-southwest.

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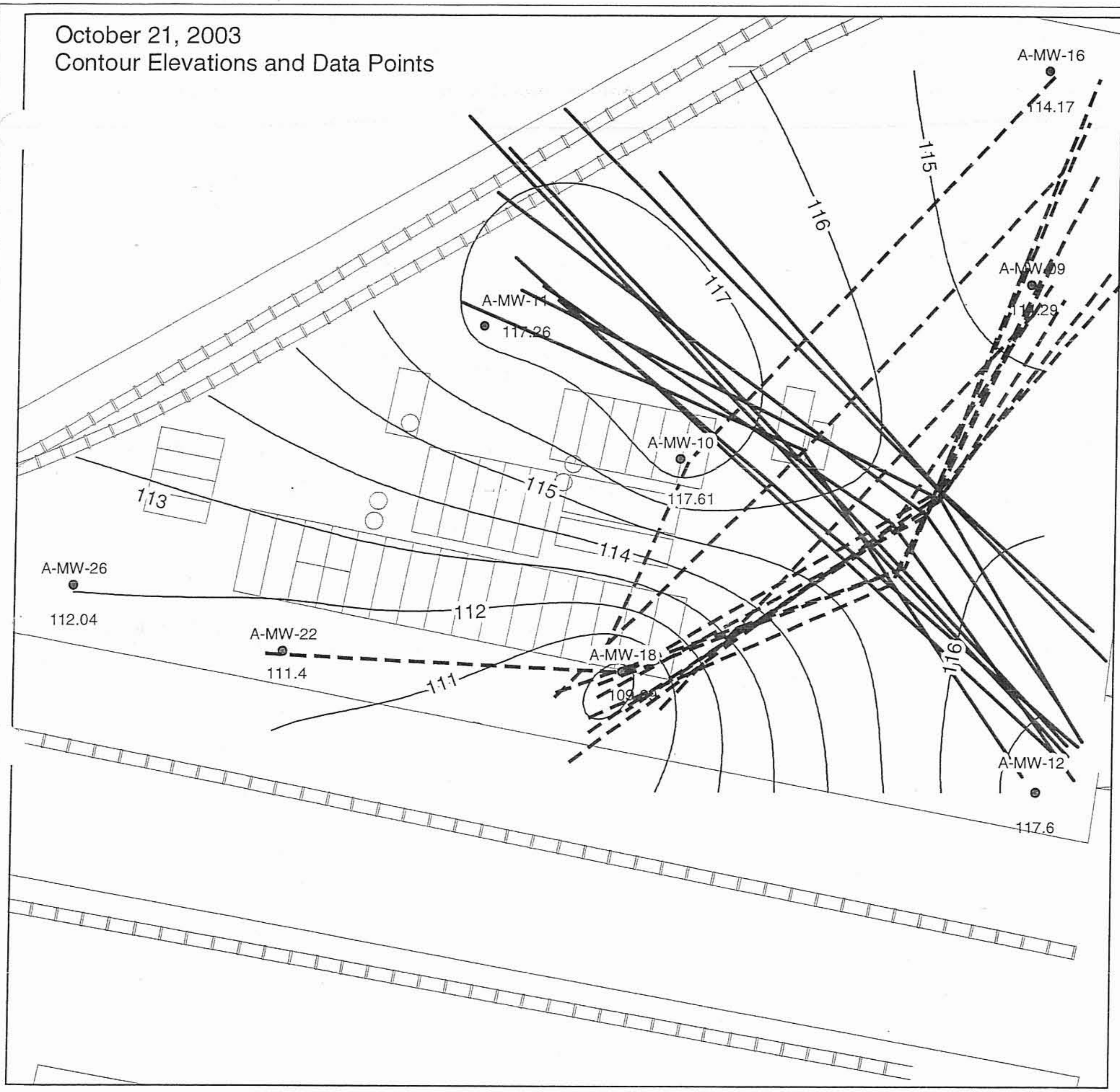
Figure 4-6
Oblique View of Base of Unit D



Explanation

- Well and water level
- Interpreted line of equal elevation

Groundwater Ridges and Troughs

- Ridge
- Trough

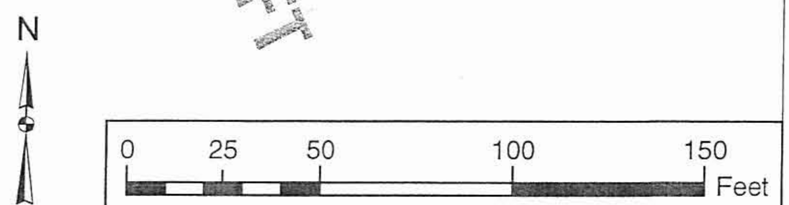


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Figure 4-7
Ridge and Trough Axes in Shallow Groundwater 2003

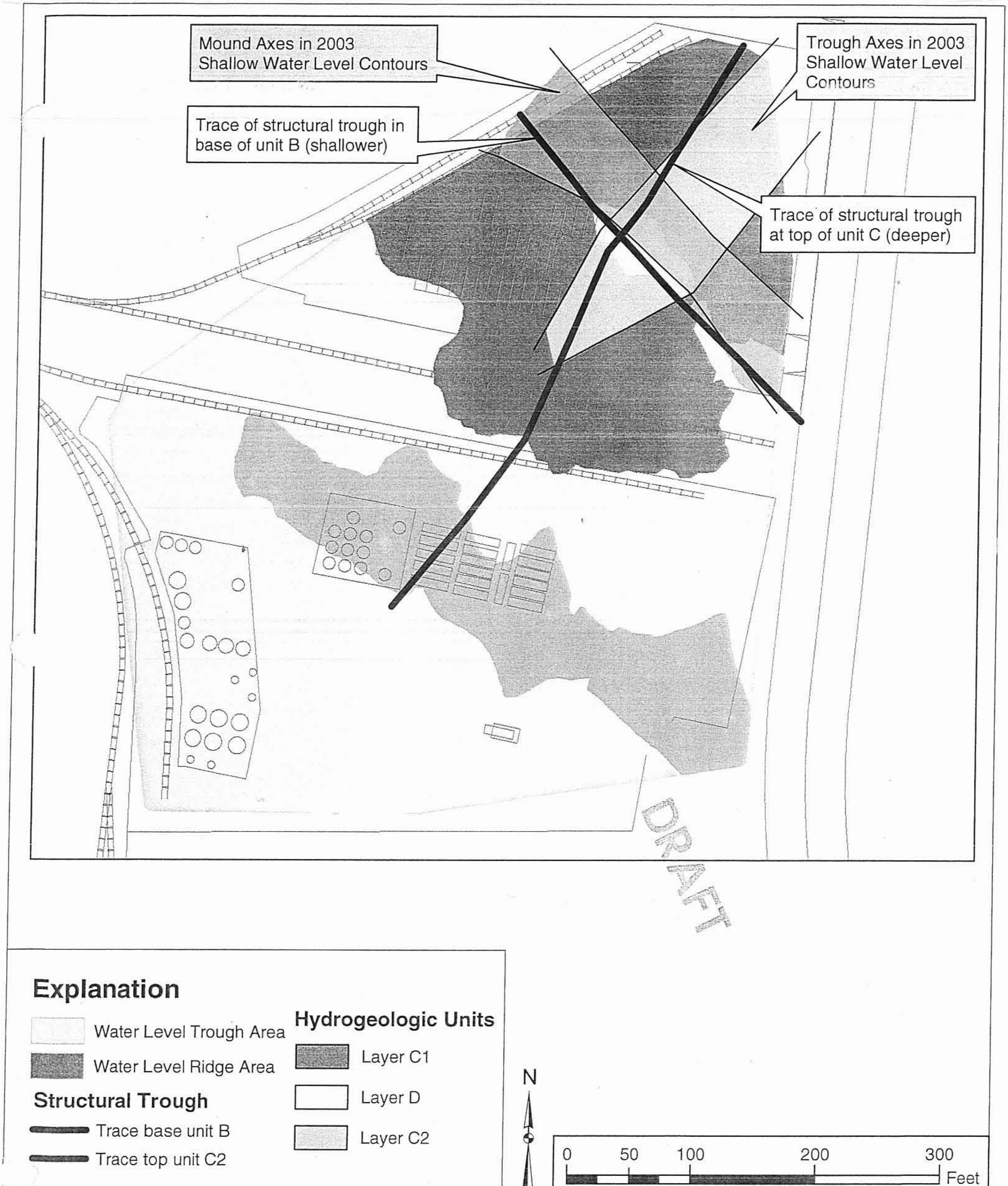

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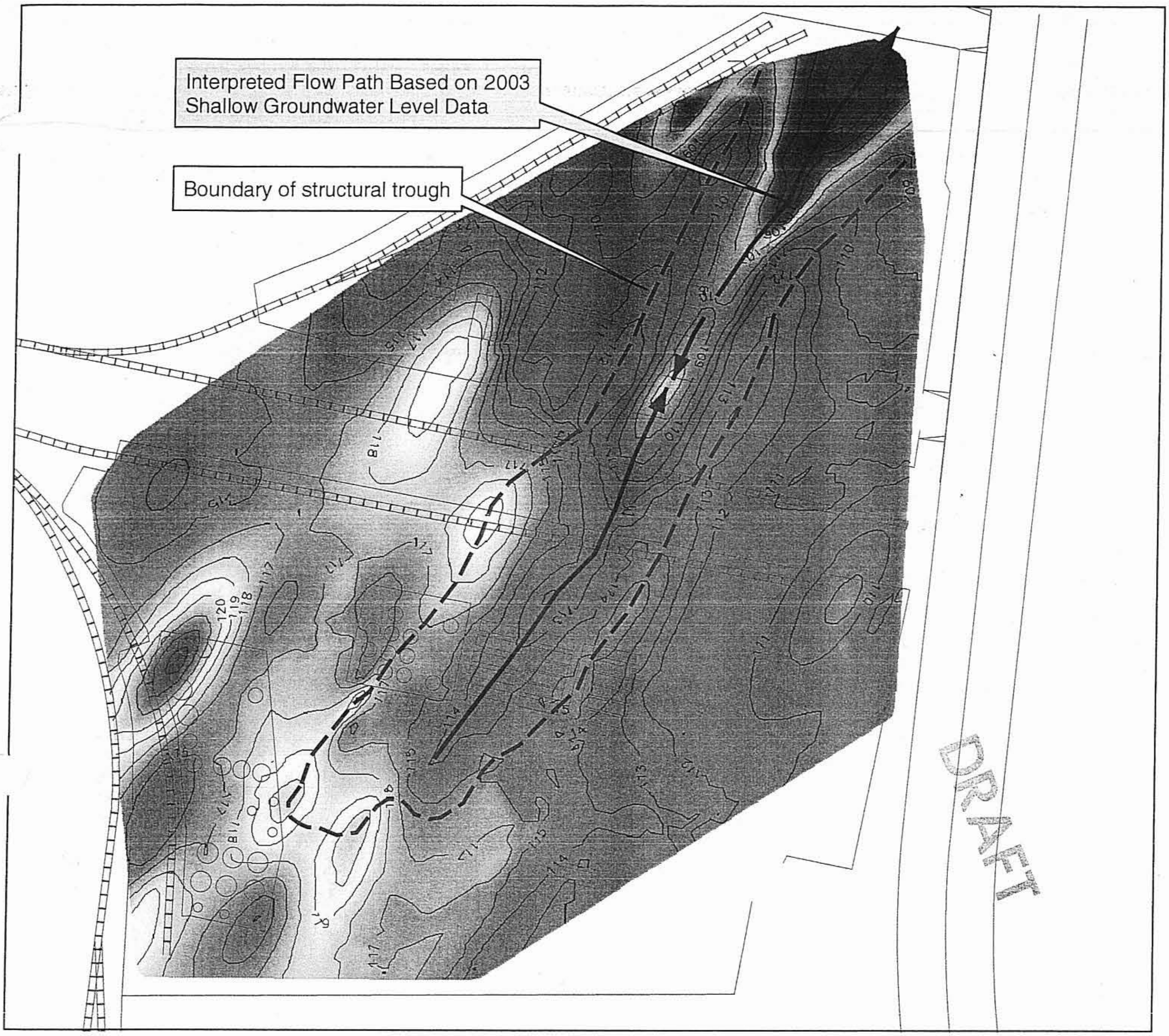
Figure 4-8
Relationship of 2003 Shallow Groundwater Interpretations to Structural Troughs



very convenient, next page contours - very unlikely.

Explanation

- — — Trough Boundary
- ⟶ Interpreted shallow groundwater flow path in 2003

Top of Unit C2 Elevation (ft)

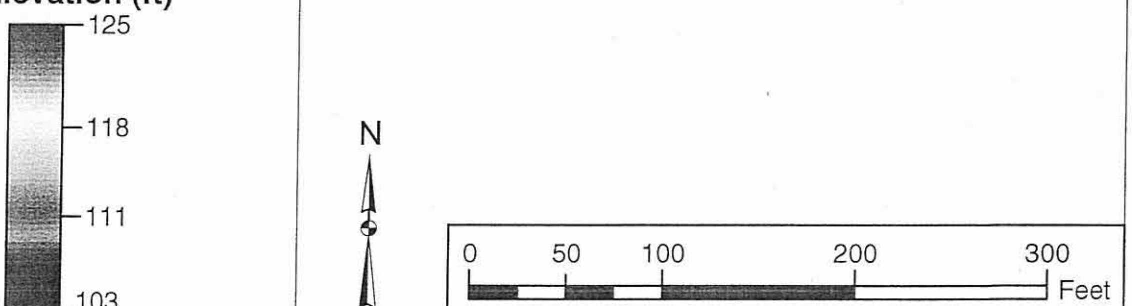


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Figure 4-9
Trough in Unit C2 and Interpreted 2003 Shallow Groundwater Flow Paths

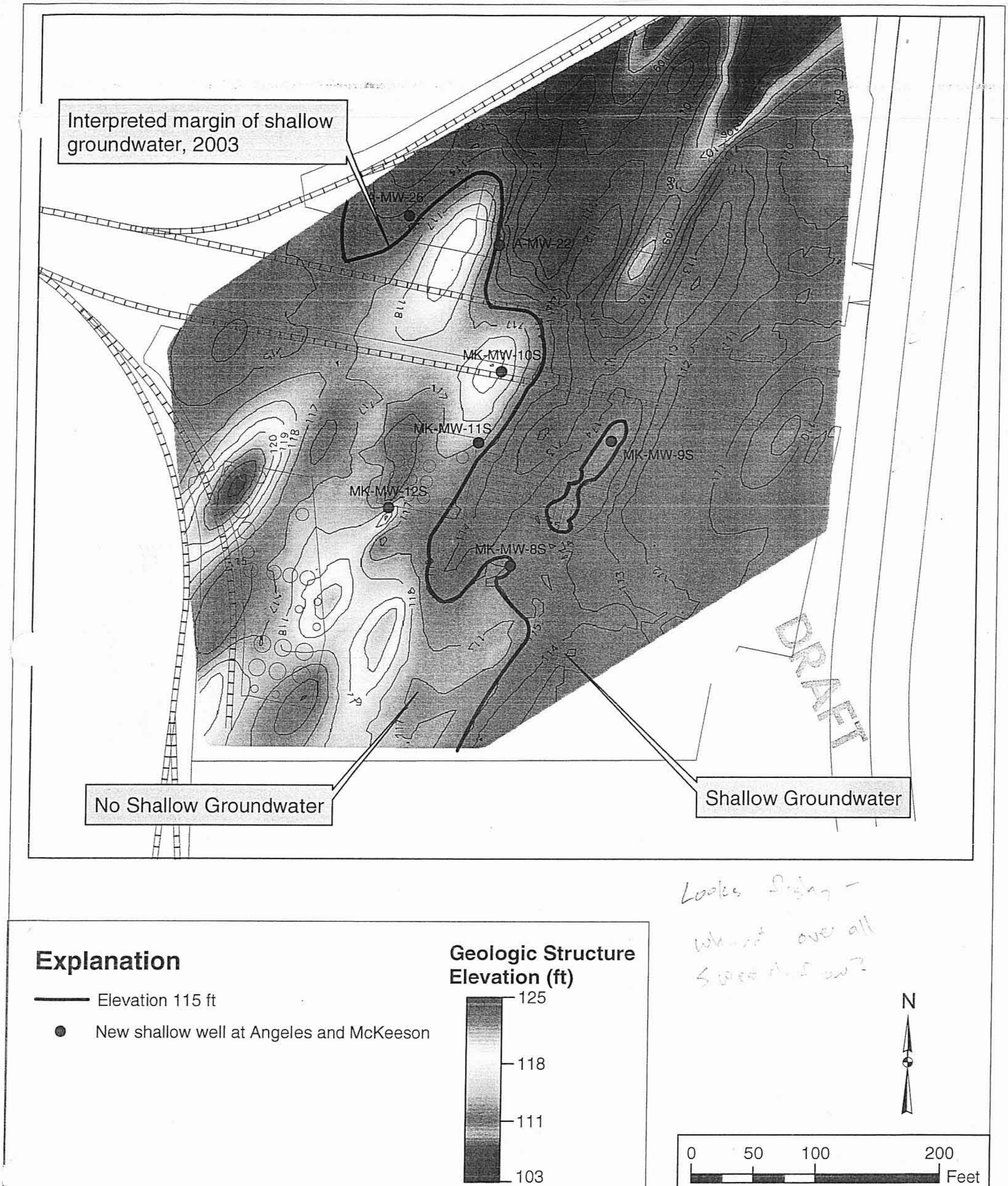

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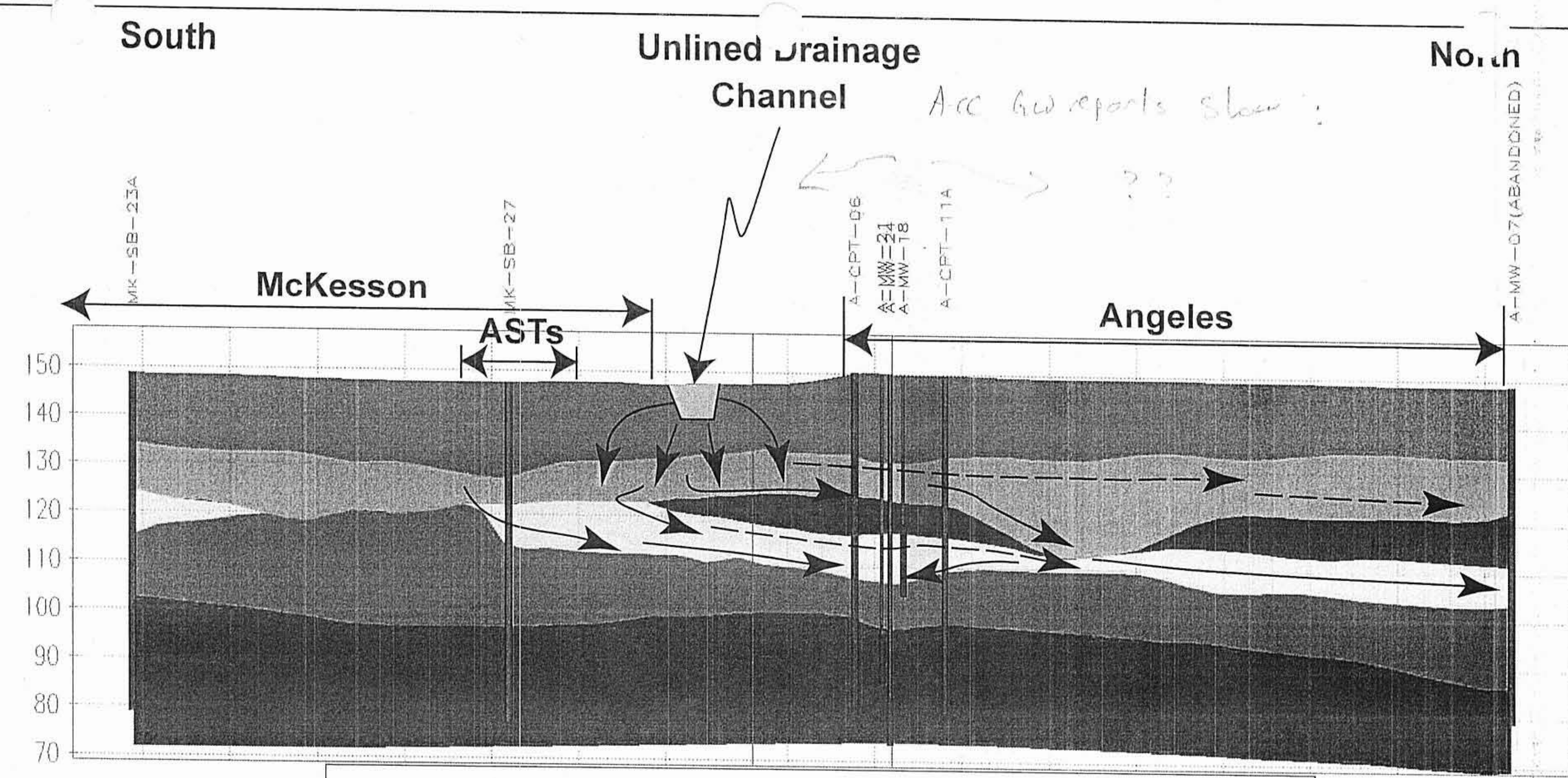
Figure 4-10
Top of Unit C2 Showing 2003 Extent of Shallow Groundwater



Explanation

Interpreted recharge/groundwater flow paths based on 2003 water table

Hypothetical flow path when water table is higher

Hydrogeologic Units

- Unit A-Fill to silty sand to clayey silt
- Unit B-Sand
- Unit C1-Silt
- Unit D-Silty sand
- Unit C2-Clayey silt
- Unit E-Sand

Well and screen interval

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Figure 4-11
Cross Section Along Trough in Unit C2 Showing Interpreted Shallow Groundwater Flow Paths

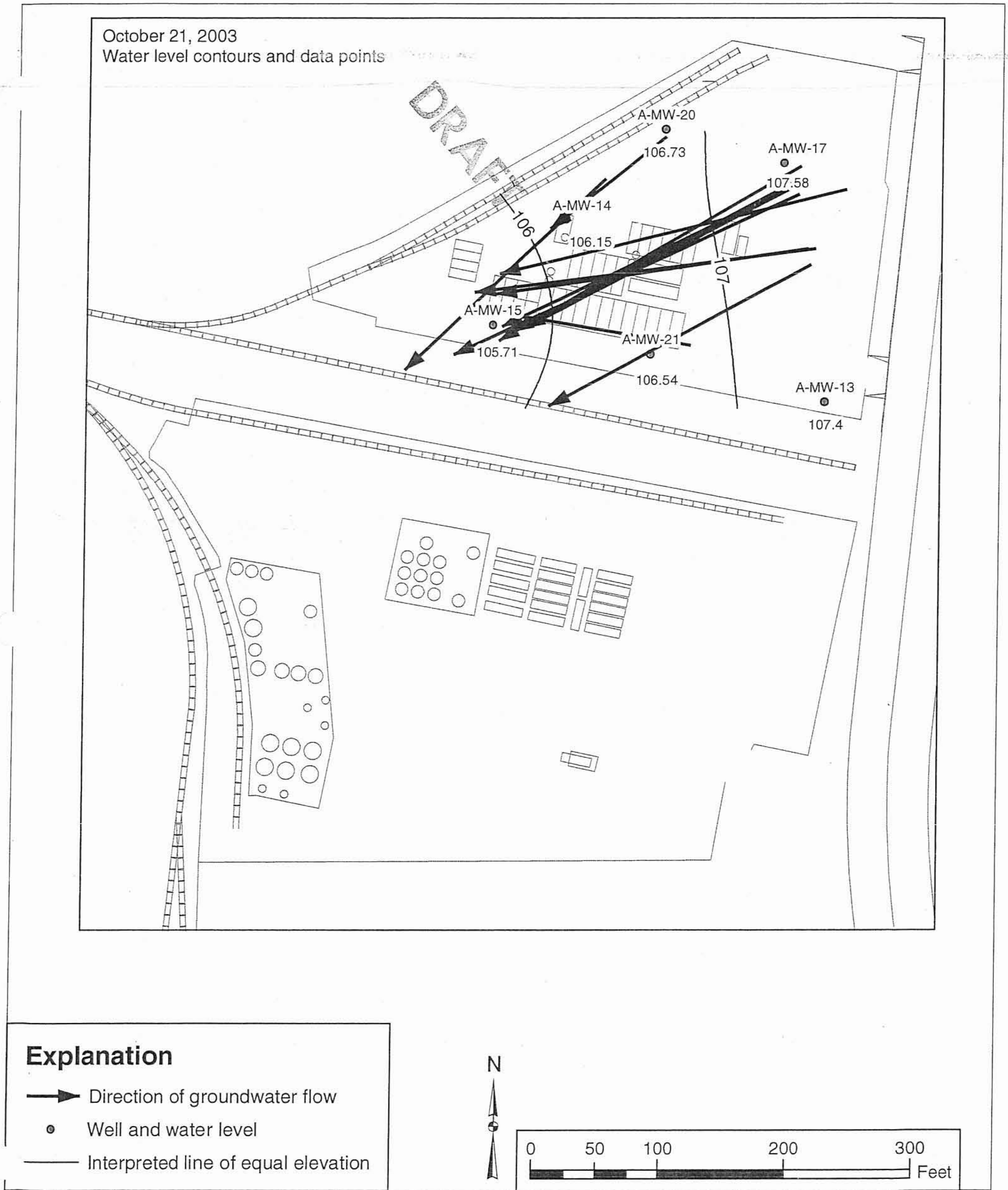

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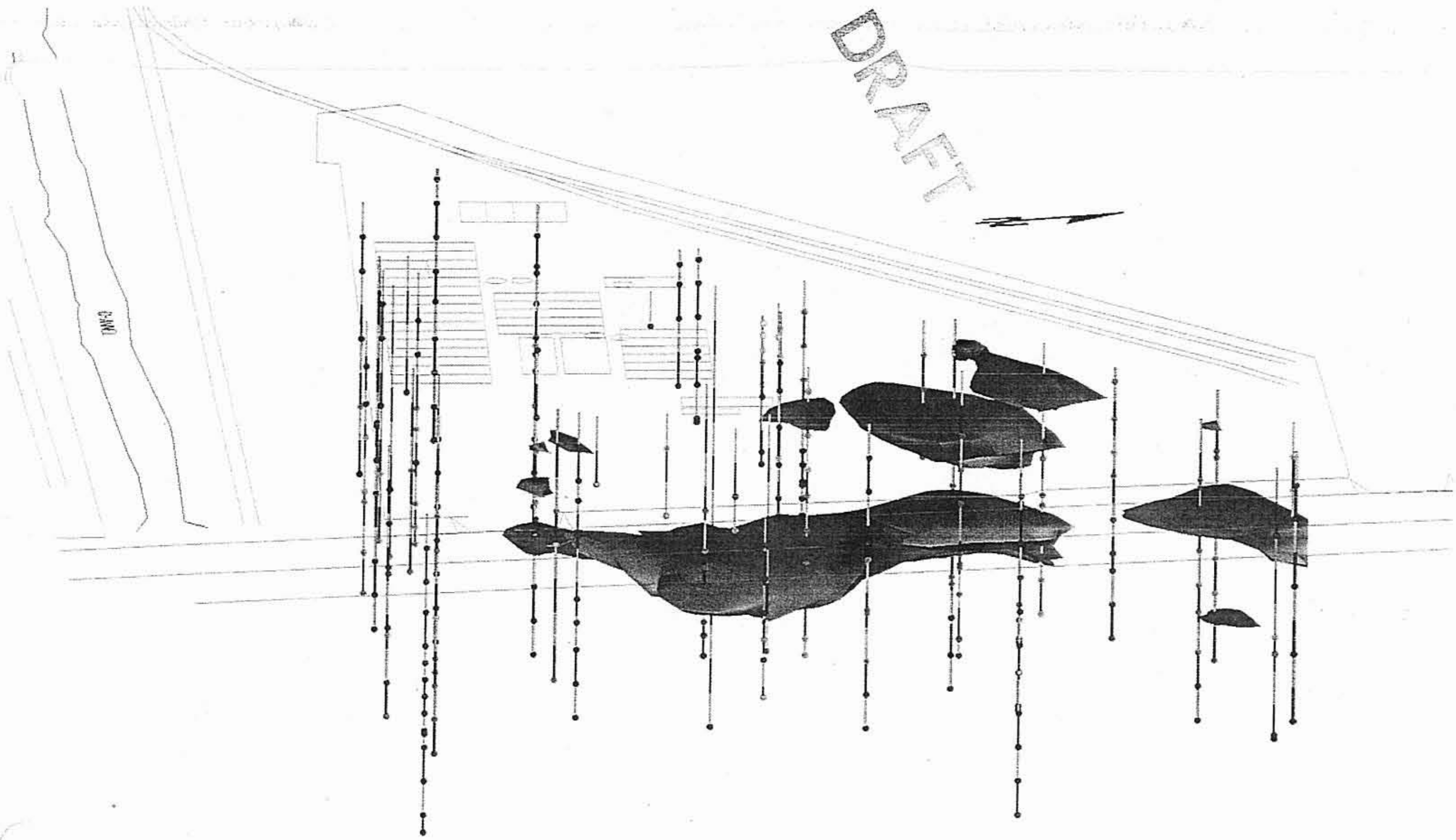
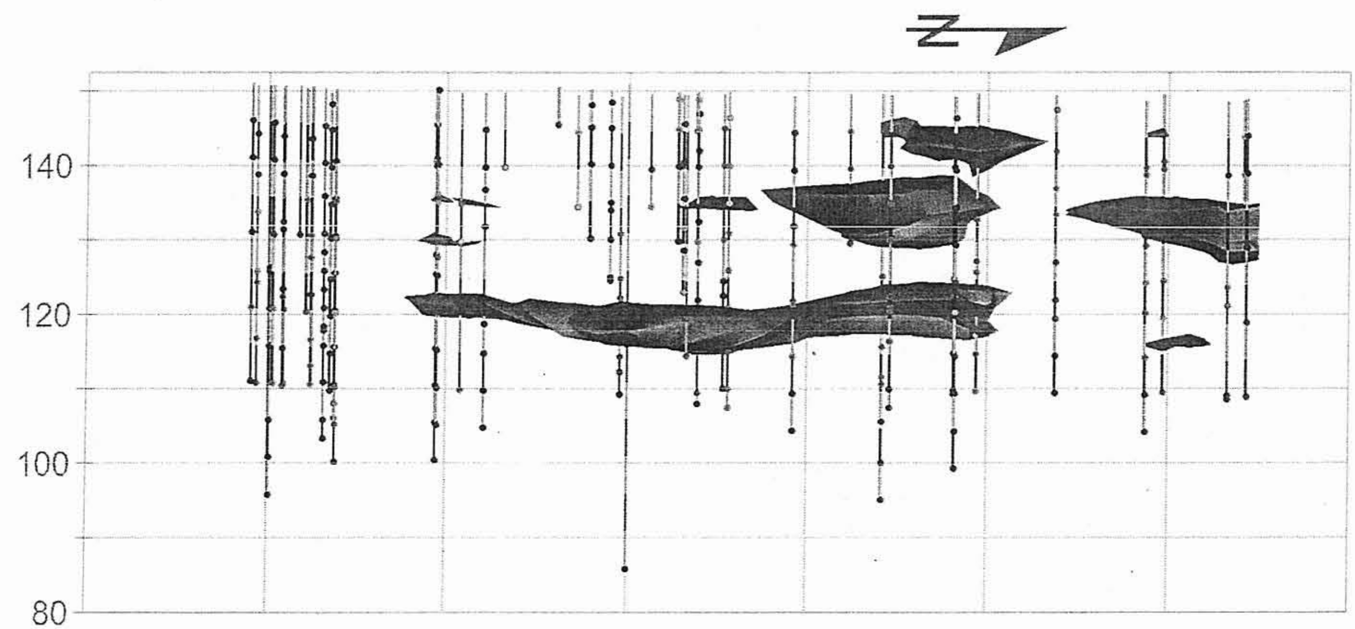
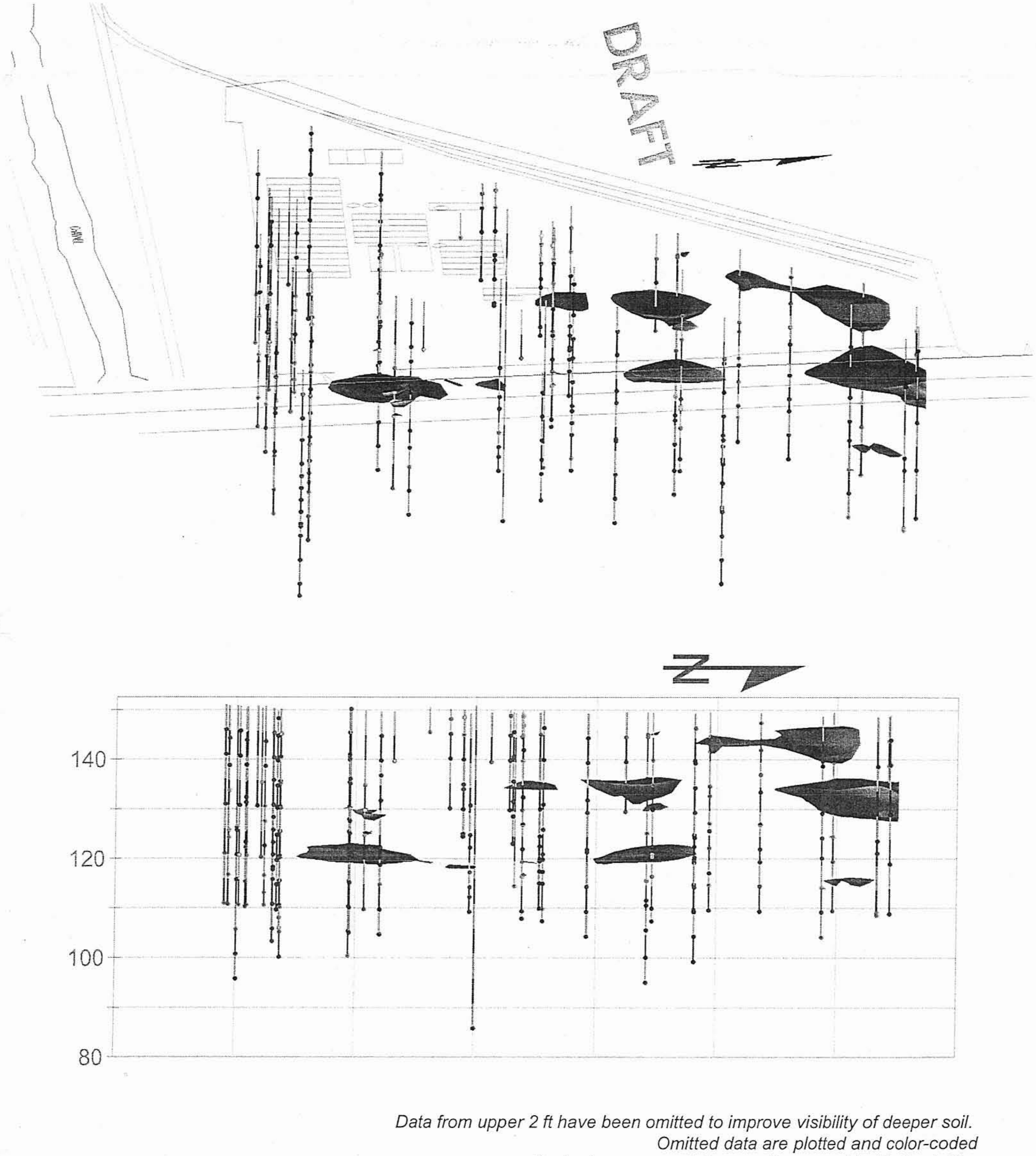
Figure 4-12
Composite of Interpreted 2003 Flow Directions in Deep Groundwater





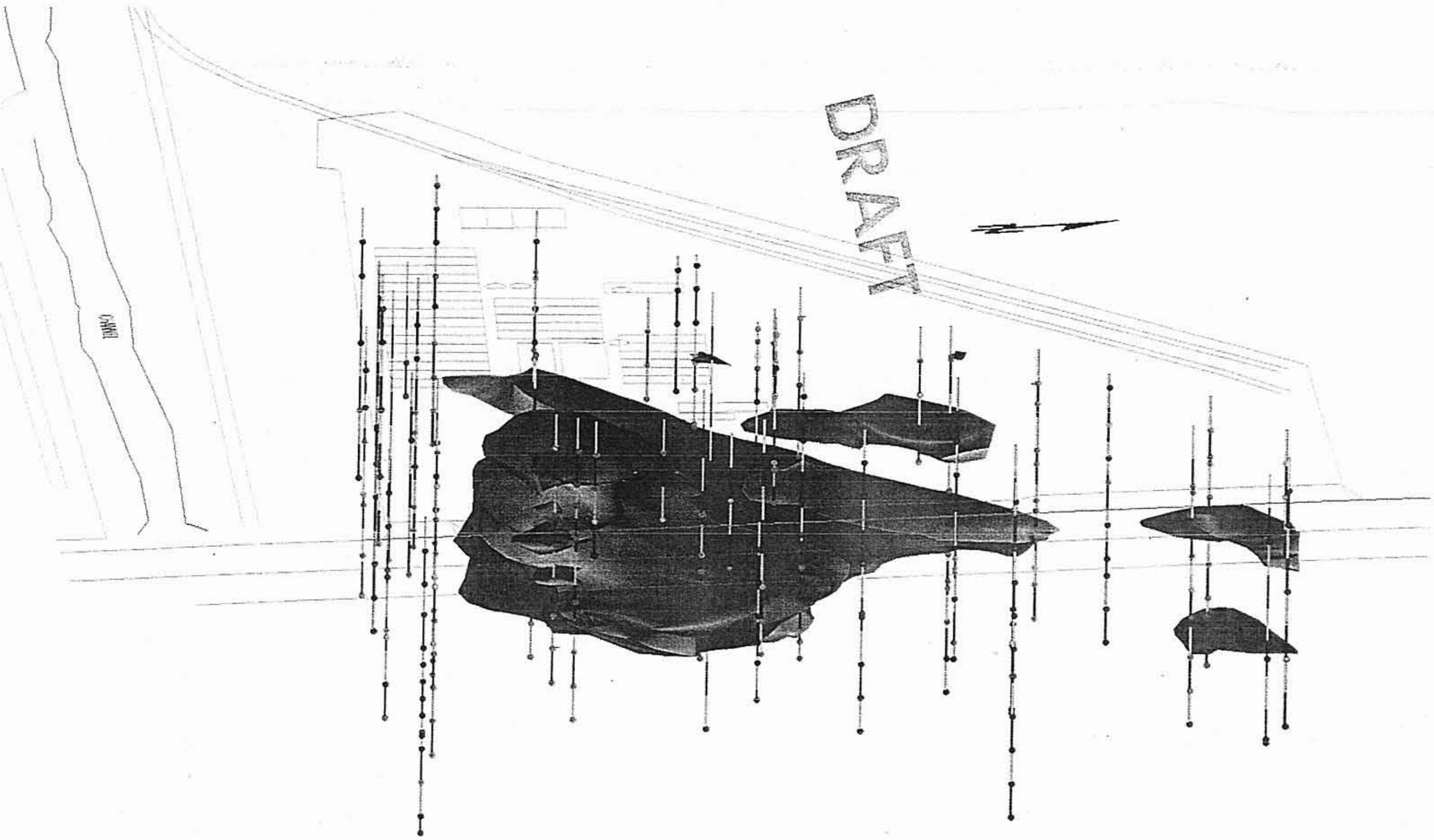
Data from upper 2 ft have been omitted to improve visibility of deeper soil. Omitted data are plotted and color-coded on the boring representations and are provided in the tables.

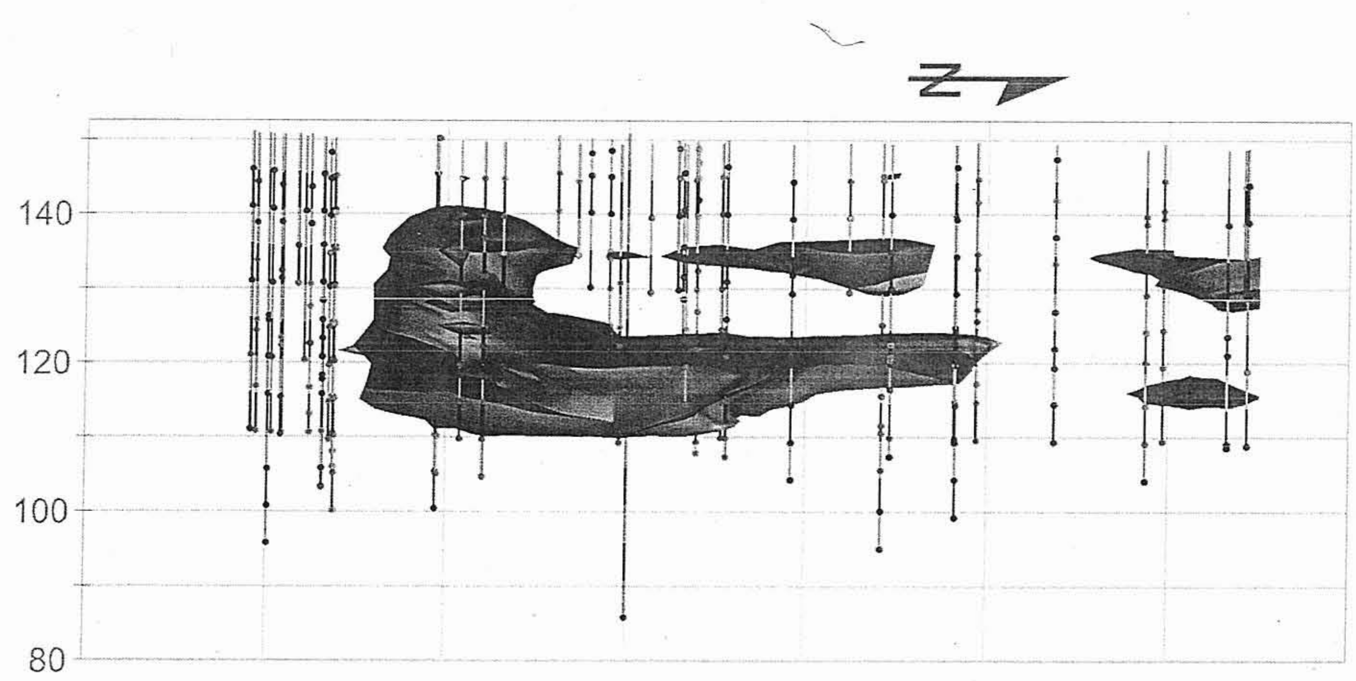
Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Expert's Report February 2004	**Figure 4-13** **1,1,1-TCA in Soil with Lithology**



Data from upper 2 ft have been omitted to improve visibility of deeper soil.
Omitted data are plotted and color-coded
on the boring representations and are provided in the tables.

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA	**Figure 4-14** **PCE in Soil with Lithology**
	Expert's Report February 2004	





Data from upper 2 ft have been omitted to improve visibility of deeper soil.
Omitted data are plotted and color-coded
on the boring representations and are provided in the tables.

Shaw® Shaw E & I	Angeles Chemical Company Site Santa Fe Springs, CA Expert's Report February 2004	**Figure 4-15** **Toluene in Soil with Lithology**

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